

**KSD362**

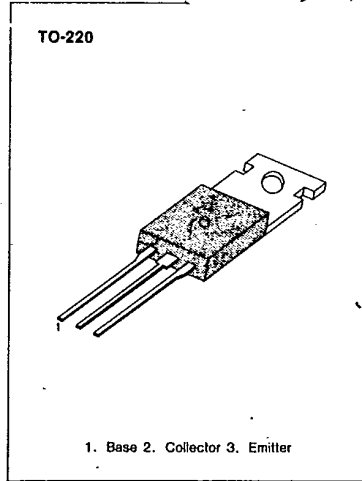
**NPN EPITAXIAL SILICON TRANSISTOR**

**B/W TV HORIZONTAL DEFLECTION OUTPUT**

- Collector-Base Voltage  $V_{CBO} = 150V$
- Collector Current  $I_C = 5A$
- Collector Dissipation  $P_C = 40W$  ( $T_C = 25^\circ C$ )

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	150	V
Collector-Emitter Voltage	$V_{CEO}$	70	V
Emitter-Base Voltage	$V_{EBO}$	8	V
Collector Current	$I_C$	5	A
Collector Dissipation ( $T_C = 25^\circ C$ )	$P_C$	40	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ C$



**3**

**ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )**

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 1mA, I_E = 0$	150			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 20mA, R_{BE} = \infty$	70			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 1mA, I_C = 0$	8			V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 100V, I_E = 0$			20	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 5A$	20		140	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 0.5A$			1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 0.5A$			1.5	V
Current Gain Bandwidth Product	$f_T$	$V_{CE} = 5V, I_C = 0.5A$		10		MHz

**$h_{FE}$  CLASSIFICATION**

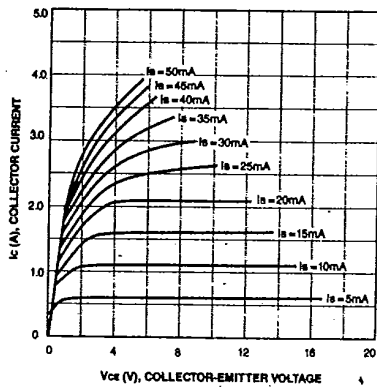
Classification	N	R	O
$h_{FE}$	20-50	40-80	70-140

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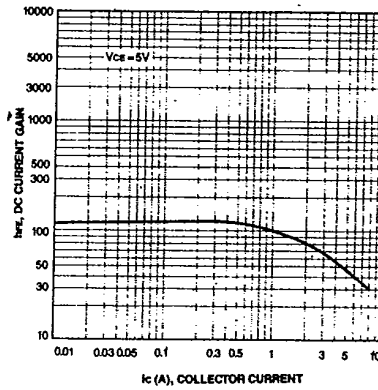
NPN EPITAXIAL SILICON TRANSISTOR

T-33-11

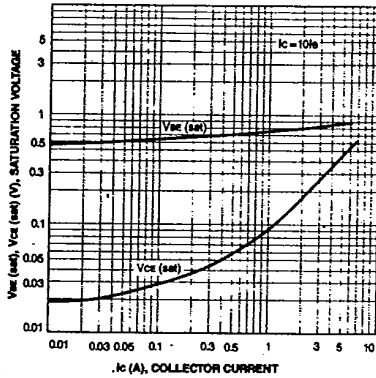
STATIC CHARACTERISTIC



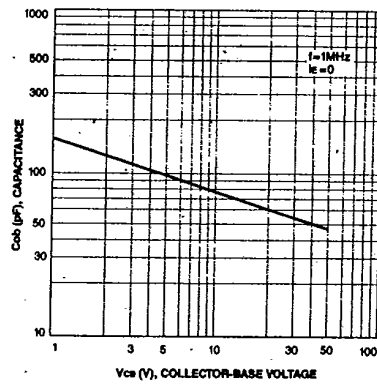
DC CURRENT GAIN



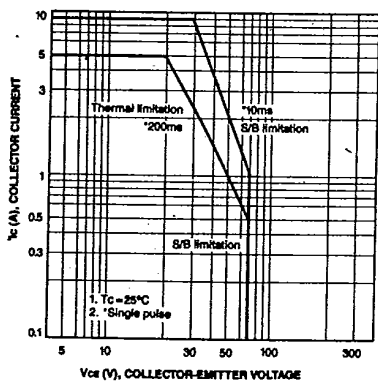
BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



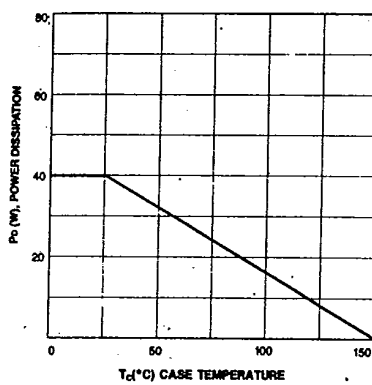
COLLECTOR OUTPUT CAPACITANCE



SAFE OPERATING AREA



POWER DERATING



**KSD363**

**NPN EPITAXIAL SILICON TRANSISTOR**

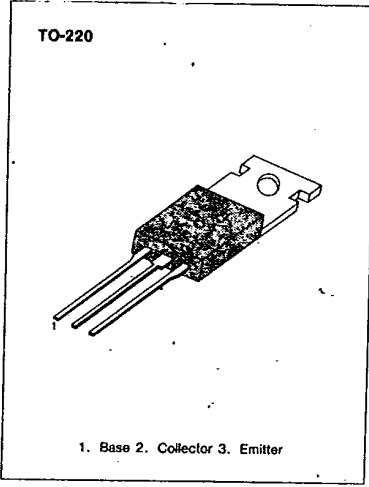
T-33-11

**B/W TV HORIZONTAL DEFLECTION OUTPUT**

- Collector-Base Voltage  $V_{CB0}=300V$
- Collector Current  $I_C=6A$
- Collector Dissipation  $P_C=40W$  ( $T_C=25^\circ C$ )

**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ C$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	300	V
Collector-Emitter Voltage	$V_{CE0}$	120	V
Emitter-Base Voltage	$V_{EB0}$	8	V
Collector Current	$I_C$	6	A
Collector Dissipation ( $T_C=25^\circ C$ )	$P_C$	40	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ C$



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**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )**

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_C=1mA, I_E=0$	300			V
Collector-Emitter Breakdown Voltage	$BV_{CE0}$	$I_C=20mA, I_B=0$	120			V
Emitter-Base Breakdown Voltage	$BV_{EB0}$	$I_E=-1mA, I_C=0$	8			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=250V, I_E=0$			1	mA
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=1A$	40		240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=0.1A$			1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A, I_B=0.1A$			1.5	V
Current Gain-Band width Product	$f_T$	$V_{CE}=5V, I_C=0.5A$		10		MHz

**$h_{FE}$  CLASSIFICATION**

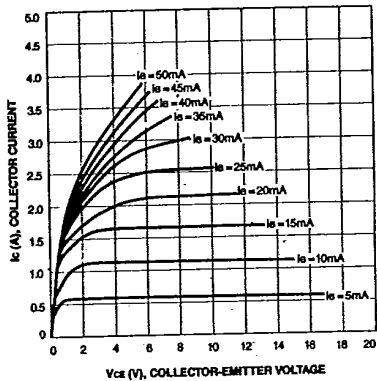
Classification	R	O	Y
$h_{FE}$	40-80	70-140	120-240

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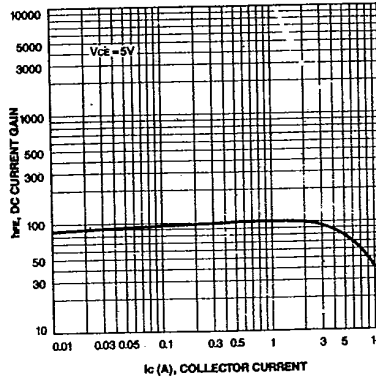
NPN EPITAXIAL SILICON TRANSISTOR

T-33-11

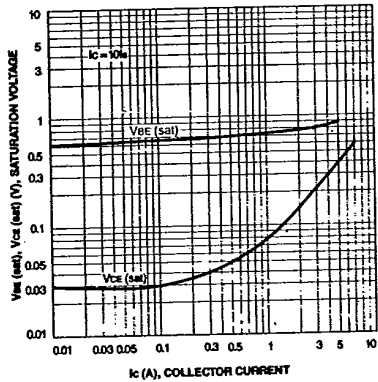
STATIC CHARACTERISTIC



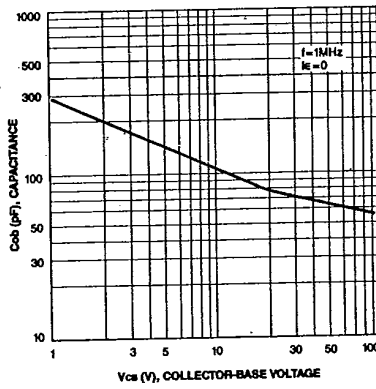
DC CURRENT GAIN



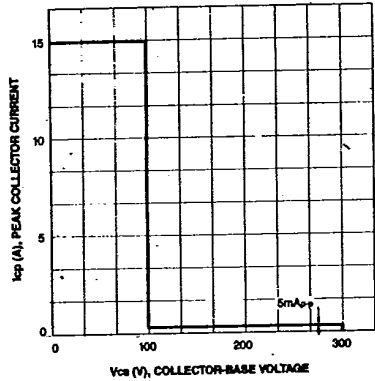
BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



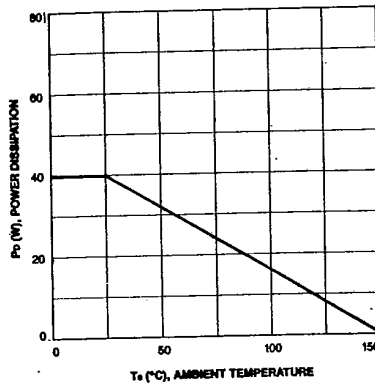
COLLECTOR OUTPUT CAPACITANCE



SAFE OPERATING AREA  
(On HORIZONTAL DEFLECTION OUTPUT CIRCUIT)



POWER DERATING



**KSD526****NPN EPITAXIAL SILICON TRANSISTOR**

T-33-09

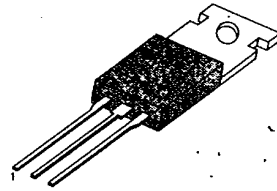
**POWER AMPLIFIER APPLICATIONS**

- Complement to KSB596

**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	80	V
Collector-Emitter Voltage	$V_{CE0}$	80	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_C$	4	A
Base Current	$I_B$	0.4	A
Collector Dissipation ( $T_c=25^\circ\text{C}$ )	$P_C$	30	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~150	$^\circ\text{C}$

TO-220



1. Base 2. Collector 3. Emitter

3

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )**

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{C0}$	$V_{CB}=80\text{V}, I_E=0$			30	$\mu\text{A}$
Emitter Cutoff Current	$I_{E0}$	$V_{EB}=5\text{V}, I_C=0$			100	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=50\text{mA}, I_B=0$	80			V
Emitter Base Breakdown Voltage	$BV_{EBO}$	$I_E=10\text{mA}, I_C=0$	5			V
DC Current Gain	$h_{FE1}$	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	40		240	
	$h_{FE2}$	$V_{CE}=5\text{V}, I_C=3\text{A}$	15	50		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3\text{A}, I_B=0.3\text{A}$		0.45	1.5	V
Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE}=5\text{V}, I_C=3\text{A}$		1	1.5	V
Current Gain-Bandwidth Product	$f_T$	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	3	8		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		90		pF

 **$h_{FE}(1)$  CLASSIFICATION**

Classification	R	O	Y
$h_{FE}(1)$	40-80	70-140	120-240

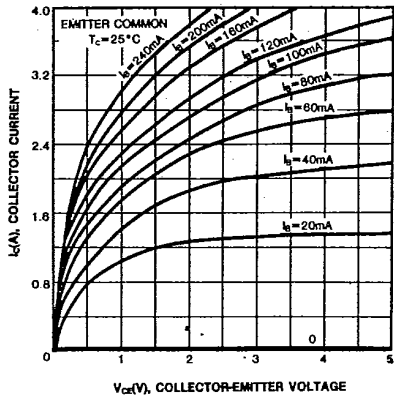


KSD526

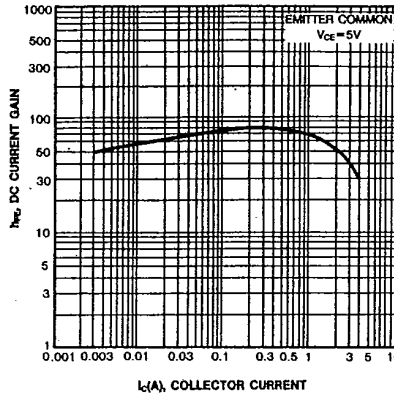
NPN EPITAXIAL SILICON TRANSISTOR

T-33-09

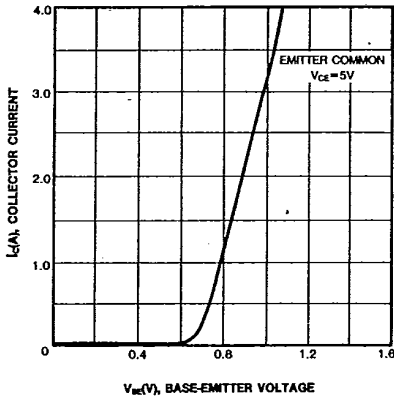
STATIC CHARACTERISTIC



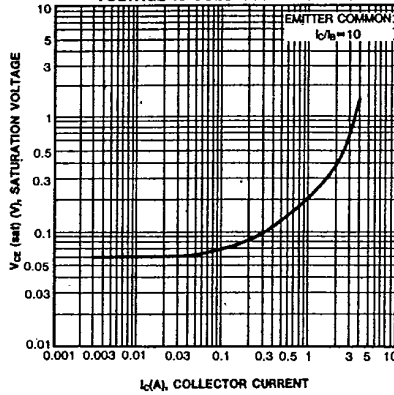
DC CURRENT GAIN



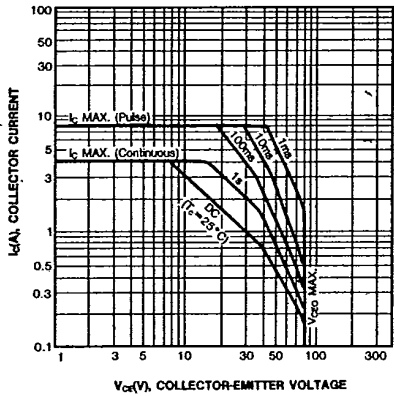
BASE-EMITTER ON VOLTAGE



COLLECTOR-EMITTER SATURATION VOLTAGE vs COLLECTOR CURRENT



SAFE OPERATING AREA



POWER DERATING

