

*New Jersey Semi-Conductor Products, Inc.*

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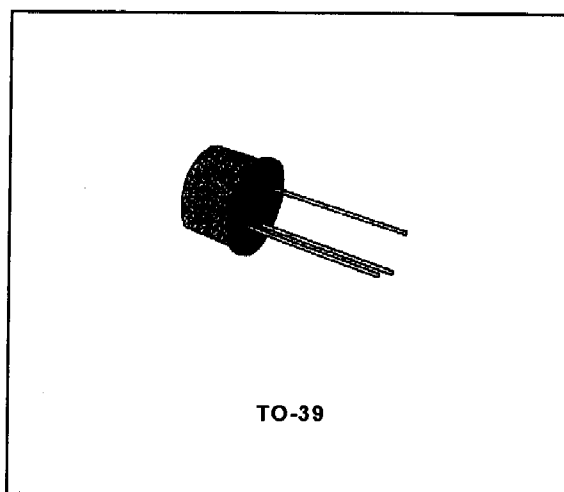
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## BF257 BF258-BF259

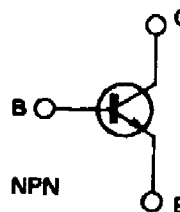
### HIGH VOLTAGE VIDEO AMPLIFIERS

#### DESCRIPTION

The BF257, BF258 and BF259 are silicon planar epitaxial NPN transistors in Jedec TO-39 metal case. They are particularly designed for video output stages in CTV and MTV sets, class A audio output stages and drivers for horizontal deflection circuits.

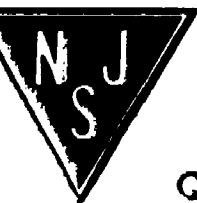


#### INTERNAL SCHEMATIC DIAGRAM



#### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit
		BF257	BF258	BF259	
$V_{CBO}$	Collector-base Voltage ( $I_E = 0$ )	160	250	300	V
$V_{CEO}$	Collector-emitter Voltage ( $I_B = 0$ )	160	250	300	V
$V_{EBO}$	Emitter-base Voltage ( $I_C = 0$ )	5			V
$I_C$	Collector Current	100			mA
$I_{CM}$	Collector Peak Current	200			mA
$P_{tot}$	Total Power Dissipation at $T_{amb} \leq 50^\circ C$	5			W
$T_{stg}$	Storage Temperature	- 55 to 200			$^\circ C$
$T_j$	Junction Temperature	200			$^\circ C$



Quality Semi-Conductors

## BF257-BF258-BF259

### THERMAL DATA

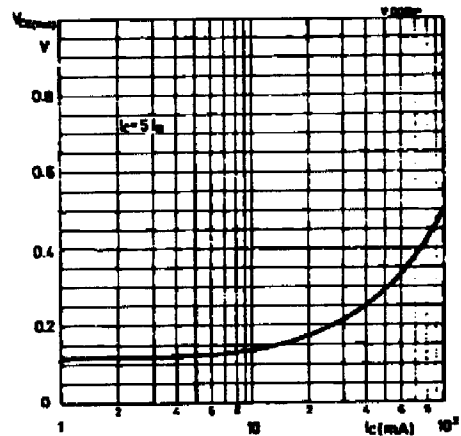
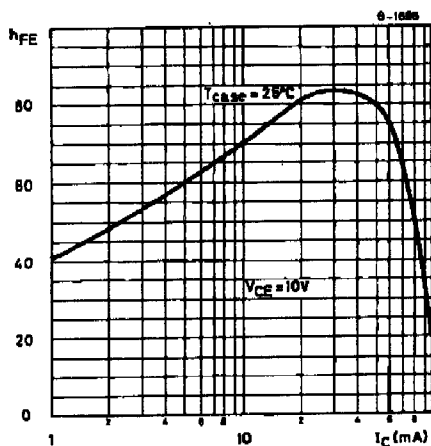
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	30	$^{\circ}C/W$
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	175	$^{\circ}C/W$

### ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CBO}$	Collector Cutoff Current ( $I_E = 0$ )	for <b>BF257</b> $V_{CB} = 100\ V$ for <b>BF258</b> $V_{CB} = 200\ V$ for <b>BF259</b> $V_{CB} = 250\ V$			50 50 50	nA nA nA
$V_{(BR)\ CBO}$	Collector-base Breakdown Voltage ( $I_E = 0$ )	$I_C = 100\ \mu A$	for <b>BF257</b> 160 for <b>BF258</b> 250 for <b>BF259</b> 300			V V V
$V_{(BR)\ CEO}^*$	Collector-emitter Breakdown Voltage ( $I_B = 0$ )	$I_C = 10\ mA$	for <b>BF257</b> 160 for <b>BF258</b> 250 for <b>BF259</b> 300			V V V
$V_{(BR)\ EBO}$	Emitter-base Breakdown Voltage ( $I_C = 0$ )	$I_E = 100\ \mu A$	5			V
$V_{CE\ (sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 30\ mA$ $I_B = 6\ mA$			1	V
$h_{FE}^*$	DC Current Gain	$I_C = 30\ mA$ $V_{CE} = 10\ V$	25			
$f_T$	Transition Frequency	$I_C = 15\ mA$ $V_{CE} = 10\ V$		90		MHz
$C_{re}$	Reverse Capacitance	$I_C = 0$ $V_{CE} = 30\ V$ $f = 1\ MHz$		3		pF

\* Pulsed : pulse duration = 300  $\mu s$ , duty cycle = 1 %.

### DC Current Gain.



**T039 MECHANICAL DATA**

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	12.7			0.500		
B			0.49			0.019
D			6.6			0.260
E			8.5			0.334
F			9.4			0.370
G	5.08			0.200		
H			1.2			0.047
I			0.9			0.035
L	45° (typ.)					

