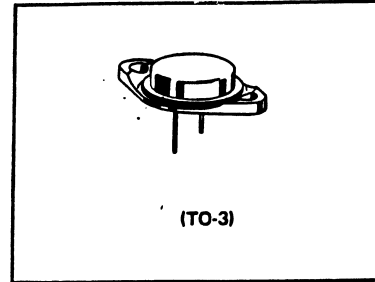


**2N2137 (GERMANIUM)**

PNP germanium industrial power transistors for driver applications in high reliability equipment.

**MAXIMUM RATINGS**

Rating	Symbol		Unit
Collector-Base Voltage	$V_{CB}$	30	Vdc
Collector-Emitter Voltage	$V_{CES}$	30	Vdc
Collector-Emitter Voltage	$V_{CEO}$	20	Vdc
Emitter-Base Voltage	$V_{EB}$	15	Vdc
Total Device Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	$P_D$	70 0.833	Watts W/ $^\circ C$
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +110 $^\circ C$	



**ELECTRICAL CHARACTERISTICS**

\*Characteristics apply also to corresponding, non-A type numbers.

Characteristic	Symbol	Min	Typ	Max	Unit
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**OFF CHARACTERISTICS**

Collector-Emitter Breakdown Voltage** ( $I_C = 500$ mAdc, $I_B = 0$ )	$BV_{CEO}^{**}$	20	-	-	Vdc
Collector-Emitter Breakdown Voltage** ( $I_C = 300$ mAdc, $V_{RE} = 0$ )	$BV_{CES}^{**}$	30	-	-	Vdc
Floating Potential ( $V_{CB} = 30$ Vdc, $I_E = 0$ )	$V_{EBF}$	-	-	1.0	Vdc
Collector-Base Cutoff Current ( $V_{CB} = 2.0$ Vdc, $I_E = 0$ ) ( $V_{CB} = V_{CB(max)}$ , $I_C = 0$ , $T_C = +71^\circ C$ )	$I_{CBO}$	-	0.018 0.75	0.05 5.0	mAdc
Collector-Base Cutoff Current† ( $V_{CB} = V_{CB(max)}$ , $I_E = 0$ )	$I_{CBO1}$	-	0.1	2.0	mAdc
Emitter-Base Cutoff Current ( $V_{BE} = V_{BE(max)}$ , $I_C = 0$ ) ( $V_{BE} = V_{BE(max)}$ , $I_C = 0$ , $T_C = +71^\circ C$ )	$I_{EBO}$	-	0.08 0.5	2.0 5.0	mAdc

**ON CHARACTERISTICS**

DC Current Gain ( $I_C = 0.5$ Adc, $V_{CE} = 2.0$ Vdc)†	$h_{FE1}$	30	45	60	-
( $I_C = 2.0$ Adc, $V_{CE} = 2.0$ Vdc)	$h_{FE}$	15	22	-	-
Collector-Emitter Saturation Voltage ( $I_C = 2.0$ Adc, $I_B = 200$ mAdc)	$V_{CE(sat)}$	-	0.12	0.5	Vdc
Base-Emitter Saturation Voltage ( $I_C = 2.0$ Adc, $I_B = 200$ mAdc)	$V_{BE(sat)}$	-	0.75	1.2	Vdc

**DYNAMIC CHARACTERISTICS**

Common Emitter Cutoff Frequency ( $I_C = 2.0$ Adc, $V_{CE} = 6.0$ Vdc)	$f_{\alpha e}$	12	20	-	kHz
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\*\*Sweep method: 1/2 cycle sine wave, 60 Hz.

