

40318

N-P-N

Silicon Power Transistor

**MAXIMUM RATINGS**

Collector-to-Emitter Sustaining Voltage ( $R_{\theta JC} = 500 \Omega$ ) .....	$V_{CE(sus)}$	300	V
Emitter-to-Base Voltage .....	$V_{EB0}$	6	V
Collector Current .....	$I_C$	2	A
Base Current .....	$I_B$	1	A
Transistor Dissipation:	$P_T$	35	W
$T_c$ up to 25°C .....	$P_T$	See Rating Chart	W
$T_c$ above 25°C .....	$P_T$	5	W
$T_c = 175^\circ\text{C}$ .....			
Temperature Range:	$T_J$ (opr)	-65 to 200	°C
Operating (Junction) .....			

**CHARACTERISTICS (At case temperature = 25°C)**

Collector-to-Emitter Sustaining Voltage ( $I_C = 200 \text{ mA}$ , $R_{\theta JC} = 500 \Omega$ ) .....	$V_{CE(sus)}$	300 min	V
Base-to-Emitter Voltage ( $V_{CE} = 10 \text{ V}$ , $I_C = 0.5 \text{ A}$ ) ...	$V_{BE}$	1.5 max	V
Collector-Cutoff Current:			
$V_{CE} = 150 \text{ V}$ , $I_B = 0$ .....	$I_{CBO}$	5 max	mA
$V_{CE} = 150 \text{ V}$ , $V_{BE} = -1.5 \text{ V}$ , $T_c = 25^\circ\text{C}$ .....	$I_{CEV}$	5 max	mA
$V_{CE} = 150 \text{ V}$ , $V_{BE} = -1.5 \text{ V}$ , $T_c = 150^\circ\text{C}$ .....	$I_{CEV}$	10 max	mA
$V_{CE} = 150 \text{ V}$ , $V_{BE} = -1.5 \text{ V}$ , $T_c = 150^\circ\text{C}$ .....	$I_{CBO}$	5 max	mA
Emitter-Cutoff Current ( $V_{BE} = 6 \text{ V}$ , $I_C = 0$ ) .....			
Static Forward-Current Transfer Ratio:			
$V_{CE} = 10 \text{ V}$ , $I_C = 20 \text{ mA}$ .....	$h_{FE}$	40 min	
$V_{CE} = 10 \text{ V}$ , $I_C = 500 \text{ mA}$ .....	$h_{FE}$	50 min	
Second-Breakdown Collector Current ( $V_{CE} = 150 \text{ V}$ )	$I_{B/S}$	100 min	mA
Second-Breakdown Energy ( $V_{BE} = 4 \text{ V}$ , $R_{\theta JC} = 20 \Omega$ , $L = 100 \mu\text{H}$ ) .....	$E_{S/B}$	50 min	$\mu\text{J}$
Thermal Resistance, Junction-to-Case .....	( $J-C$ )	5 max	°C/W

