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2N4237
2N4238
2N4239

NPN SILICON TRANSISTOR

TO-39

MAXIMUM RATINGS (T_C=25°C)	SYMBOL	2N4237	2N4238	2N4239	UNIT
Collector-Base Voltage	V_{CBO}	50	80	100	V
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Emitter Base Voltage	V_{EBO}	6.0	6.0	6.0	V
Collector Current	I_C	3.0	3.0	3.0	A
Base Current	I_B	0.5	0.5	0.5	A
Power Dissipation	P_D	6.0	6.0	6.0	W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 TO +200		°C
Thermal Resistance	θ_{JC}		29.2		°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I_{CBO}	V_{CB}=Rated V_{CBO}		0.1	mA
I_{CEV}	V_{CE}=45V, V_{EB}=1.5V (2N4237)		0.1	mA
I_{CEV}	V_{CE}=75V, V_{EB}=1.5V (2N4238)		0.1	mA
I_{CEV}	V_{CE}=90V, V_{EB}=1.5V (2N4239)		0.1	mA
I_{CEV}	V_{CE}=30V, V_{EB}=1.5V, T_C=150°C (2N4237)		1.0	mA
I_{CEV}	V_{CE}=50V, V_{EB}=1.5V, T_C=150°C (2N4238)		1.0	mA
I_{CEV}	V_{CE}=70V, V_{EB}=1.5V, T_C=150°C (2N4239)		1.0	mA
I_{CEO}	V_{CE}=Rated V_{CEO}		0.7	mA
I_{EBO}	V_{EB}=6.0V		0.5	mA
BV_{CEO}	I_C=100mA (2N4237)	40		V
BV_{CEO}	I_C=100mA (2N4238)	60		V
BV_{CEO}	I_C=100mA (2N4239)	80		V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA		0.3	V
$V_{CE(SAT)}$	I_C=1.0A, I_B=0.1A		0.6	V
$V_{BE(SAT)}$	I_C=1.0A, I_B=0.1A		1.5	V
$V_{BE(ON)}$	V_{CE}=1.0V, I_C=250mA		1.0	V
h_{FE}	V_{CE}=1.0V, I_C=50mA	30		
h_{FE}	V_{CE}=1.0V, I_C=250mA	30	150	
h_{FE}	V_{CE}=1.0V, I_C=500mA	30		
h_{FE}	V_{CE}=1.0V, I_C=1.0A	15		
h_{fe}	V_{CE}=10V, I_C=100mA, f=1.0kHz	30		
f_T	V_{CE}=10V, I_C=100mA, f=1.0MHz	2.0		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=0.1MHz		100	pF