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Manufacturers of World Class Discrete Semiconductors

2N4237
2N4238
2N4239

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4237 Series types are Silicon NPN Transistors in a hermetically sealed metal case designed for power amplifier, power driver and switching power supply applications.

MAXIMUM RATINGS (T _C =25°C)	SYMBOL	2N4237	2N4238	2N4239	UNIT
Collector-Base Voltage	V _{CB0}	50	80	100	V
Collector-Emitter Voltage	V _{CEO}	40	60	80	V
Emitter Base Voltage	V _{EB0}	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 _{CB0}	V _{CB} =Rated V _{CB0}		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 _{EB0}	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