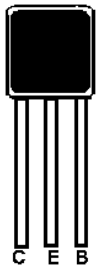
NEW ENGLAND SEMICONDUCTOR

TECHNICAL DATA

1 AMPERE
NPN
SURFACE MOUNT

NFP2033

3 Pin Flat Pack



HIGH VOLTAGE NPN TRANSISTOR SURFACE MOUNT AMPLIFIER

MAXIMUM RATINGS

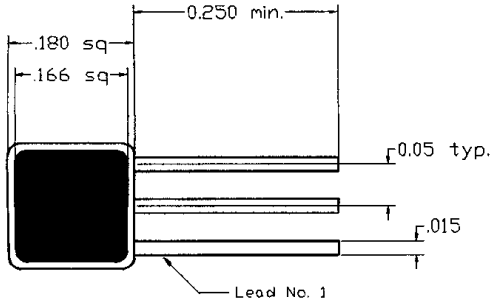
RATINGS	SYMBOL	NFP2033	UNITS
Collector-Emitter Voltage	V_{CEO}	350	Vdc
Collector-Base Voltage	V_{CBO}	400	Vdc
Emitter-Base Voltage	V_{EBO}	6.0	Vdc
Collector Current – Peak (1)	I_C	1.0	Adc
Base Current -- Continuous	I_B	0.5	Adc
Total Power Dissipation @ $T_C = 25^0C$ Derate above 25^0C	P_D	 TBD	W $mW/^0C$
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	^0C

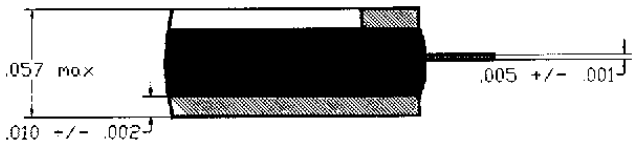
THERMAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MAX.	UNITS
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	TBD	$^0C\backslash W$
Thermal Resistance, Junction-to-Free-Air	$R_{\theta JA}$	TBD	$^0C\backslash W$

(1) Pulse Test: Pulse Width = 10ms, Duty Cycle ≤ 10%

MECHANICAL OUTLINE





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ELECTRICAL CHARACTERISTICS (T_C = 25^{0}C unless otherwise noted)

Characteristics	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage I_C = 50 mAdc, I_B = 0	$V_{CEO(sus)}$	350		Vdc
Collector-Emitter Cutoff Current V_{CE} = 300 Vdc, I_B = 0	I_{CEO}		20	µAdc
Collector-Emitter Cutoff Current V_{CE} = 400 Vdc, V_{BE} = 1.5 Vdc	I_{CEX}		500	µAdc
Emitter-Base Cutoff Current V_{EB} = 5.0 Vdc, I_C = 0	I_{EBO}		20	µAdc
ON CHARACTERISTICS (1)				
DC Current Gain I_C = 2.0 mAdc, V_{CE} = 10 Vdc I_C = 20 mAdc, V_{CE} = 10 Vdc	h_{FE}	 30 30	 160	
Collector-Emitter Saturation Voltage I_C = 50 mAdc, I_B = 5.0 mAdc	$V_{CE(sat)}$		0.6	Vdc
Base-Emitter Saturation Voltage I_C = 50 mAdc, I_B = 4.0 mAdc	$V_{BE(sat)}$		1.4	Vdc
DYNAMIC CHARACTERISTICS				
Current-Gain -- Bandwidth Product I_C = 10 mAdc, V_{CE} = 10 Vdc, f = 1.0 MHz	^fT	15		
Output Capacitance V_{CB} = 10 Vdc, I_E = 0, f = 1.0 MHz	C_{obo}		10	pF
Input Capacitance V_{CB} = 5.0 Vdc, I_E = 0, f = 1.0 MHz	C_{ibo}		75	pF

(1)Pulse Test: Pulse Width = 300µs, Duty Cycle ≤ 2.0%.