

NTE2327

Silicon NPN Transistor

High Voltage, High Speed Switch

Description:

The NTE2327 is a silicon NPN transistor in a TO126 type package designed for use in converters, inverters, switching regulators, motor control systems and switching applications.

Absolute Maximum Ratings:

Collector–Emitter Voltage ($V_{BE} = 0$, Peak value), V_{CESM}	1000V
Collector–Emitter Voltage (Open base), V_{CEO}	450V
Emitter–Base Voltage (Open Collector), V_{EBO}	5V
Collector Current, I_C	
Continuous	0.5A
Peak ($t_p = 2ms$)	1A
Base Current, I_B	
Continuous	0.2A
Peak	0.3A
Reverse Base Current (Peak Value, Note 1), $-I_{BM}$	0.3A
Total Power Dissipation ($T_{MB} \leq +60^\circ C$), P_{tot}	20W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	–65° to +150°C
Thermal Resistance, Junction–to–Mounting Base, R_{thJMB}	4.5K/W
Thermal Resistance, Junction–to–Ambient, R_{thJA}	100K/W

Note 1. Turn–Off current.

Electrical Characteristics: ($T_J = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current (Note 2)	I_{CES}	$V_{CEM} = 1000V, V_{BE} = 0$	–	–	100	μA
		$V_{CEM} = 1000V, V_{BE} = 0, T_J = +125^\circ C$	–	–	1	mA
Emitter Cutoff Current	I_{EBO}	$I_C = 0, V_{EB} = 5V$	–	–	1	mA
DC Current Gain	h_{FE}	$I_C = 50mA, V_{CE} = 5V$	–	50	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 0.1A, I_B = 10mA$	–	–	0.8	V
		$I_C = 0.2A, I_B = 20mA$	–	–	1.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 0.2A, I_B = 20mA$	–	–	1.0	V
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 100mA, I_{Boff} = 0, L = 25mH$	450	–	–	V
Transition Frequency	f_T	$I_C = 50mA, V_{CE} = 10V, f = 1MHz$	–	20	–	MHz
Turn–On Time	t_{on}	$I_{Con} = 0.2A, V_{CC} = 250V,$ $I_{Bon} = 20mA, -I_{Boff} = 40mA$	–	0.25	0.50	μs
Storage Time	t_s		–	2.0	3.5	μs
Fall Time	t_f		–	0.4	1.3	μs

Note 2. Measured with a half sine–wave voltage.

