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RoHS 2002/95/EC

NTE2688
Silicon NPN Transistor
Fast Switching for High Frequency Inverter
TO220 Type Package

Features:
- Collector–Emitter Sustaining Voltage: $V_{CE(sus)}$ = 450V Min
- Fast Switching Speed
- Low Saturation Voltage

Applications:
- Switching Regulators
- High Frequency Inverters
- General Purpose Power Amplifiers

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Collector–Base Voltage, V_{CBO} 600V
Collector–Emitter Voltage, V_{CEO} 450V
Collector–Emitter Voltage (V_{EB} = 5V), V_{CEX} 600V
Emitter–Base Voltage, V_{EBO} 7V
Collector Current, I_C
  Continuous 8A
  Peak 16A
Base Current, I_B
  Continuous 4A
  Peak 8A
Total Power Dissipation (T_C = +25°C), P_D 60W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 2.08°C/W

Electrical Characteristic: (T_C = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector−Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C = 0.2A, I_B = 0A	450	–	–	V
Collector−Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 4A, I_B = 0.8A	–	–	1.0	V
Base−Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 4A, I_B = 0.8A	–	–	1.5	V
Collector Cutoff Current	I_{CBO}	At rated voltage	–	–	100	A
	I_{CEO}	At rated voltage	–	–	100	A
Emitter Cutoff Current	I_{EBO}	At rated voltage	–	–	100	A
DC Current Gain	h_{FE}	I_C = 4A, V_{CE} = 5V	10	–	–	
		I_C = 1mA, V_{CE} = 5V	5	–	–	
Current Gain − Bandwidth Product	f_T	I_C = 0.8A, V_{CE} = 10V	–	20	–	MHz
Turn−On Time	t_{on}	I_C = 4A, I_{B1} = 0.8A, I_{B2} = −1.6A, R_L = 37.5° , V_{BB2} = 4V	–	–	0.5	s
Turn−Off Time	t_{off}		–	–	2.0	s
Fall Time	t_f		–	–	0.2	s