ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089
http://www.nteinc.com

RoHS
2002/95/EC

NTE2668
Silicon NPN Transistor
High Current Switching

Features:
- Adoption of FBET, MBIT process
- Large Current Capacitance
- Low Collector–To–Emitter Saturation Voltage
- High Speed Switching
- High Allowable Power Dissipation

Applications:
- DC–DC Converter
- Relay Drivers
- Lamp Drivers
- Motor Drivers
- Strobes

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

Collector–Base Voltage, V_{CBO} 80V
Collector–Emitter Voltage, V_{CES} 80V
Collector–Emitter Voltage, V_{CEO} 50V
Emitter–Base Voltage, V_{EBO} 6V
Collector Current, I_C
- Continuous 8A
- Pulsed 11A

Base Current, I_B 2A
Collector Power Dissipation, P_C
- T_A = +25°C 1.0W
- T_C = +25°C 15W

Operating Junction Temprature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 40V, I_E = 0	–	–	0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 4V, I_C = 0	–	–	0.1	μA
DC Current Gain	h_{FE}	V_{CE} = 2V, I_C = 500mA	200	–	560	
Gain–Bandwidth Product	f_T	V_{CE} = 10V, I_C = 500mA	–	330	–	MHz
Output Capacitance	Cob	V_{CB} = 10V, f = 1MHz	–	28	–	pF
Collector–to–Emitter Saturation Voltage	V_{CE}	I_C = 3.5A, I_B = 175mA	–	160	240	mV
		I_C = 2A , I_B = 40mA	–	110	170	mV
Base–to–Emitter Saturation Voltage	V_{BE}	I_C = 2A , I_B = 40mA	–	0.83	1.2	V
Collector–to–Base Breakdown Voltage	V_{CBO}	I_C = 10μA, I_E = 0	80	–	–	V
Collector–to–Emitter Breakdown Voltage	V_{CES}	I_C = 100μA, R_{BE} = ∞	80	–	–	V
Collector–to–Emitter Breakdown Voltage	V_{CEO}	I_C = 1mA, R_{BE} = ∞	50	–	–	V
Emitter–to–Base Breakdown Voltage	V_{EBO}	I_C = 10μA, I_C = 0	6	–	–	V
Turn–On Time	t_{on}	Pulse Width = 20μs, Duty Cycle ≤ 1%, $20I_{B1} = -20I_{B2} = I_C$ = 2.5A, V_{CC} = 25V	–	30	–	ns
Storage Time	t_{stg}		–	420	–	ns
Fall Time	t_f		–	25	–	ns

