

3918590 GENERAL SEMICONDUCTOR

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T-33-09

NPN SWITCHING POWER TRANSISTORS

This unique series utilizes General Semiconductor Industries' C²R[®] process which describes a manufacturing technology that provides surface stabilization for high voltage operation and enhances long term reliability.

NPN
200,300V
0.5 AMP SWITCHING

TO-66

***MAXIMUM RATINGS (T_C = 25°C unless otherwise noted.)**

RATING	SYMBOL	2N5660	2N5661	Unit
Collector-Base Voltage	V _{CB0}	250	400	Volts
Collector-Emitter Voltage	V _{CE0}	200	300	Volts
Emitter-Base Voltage	V _{EB0}	6.0	6.0	Volts
Collector Current-Continuous	I _C	1.0	1.0	Amps
Base Current-Continuous	I _B	0.2	0.2	Amps
Total Power Dissipation@T _C = 100°C	P _D	20	20	Watts
Junction to Case Thermal Resistance	R _{θJC}	5.0	5.0	°C/W
Operating and Storage Junction Temperature Range	T _{J(oper)} T _{stg}	-65 to +200	-65 to +200	°C

***ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted.)**

SYMBOL	CONDITIONS	2N5660		2N5661		Unit
		Min	Max	Min	Max	
V _{CB0}	I _C = 1.0mA	250	—	400	—	Volts
V _{CE0}	I _C = 20mA	200	—	300	—	Volts
V _{CE1}	I _C = 10mA, R _{BE} = 100Ω	250	—	400	—	Volts
I _{EB0}	V _{EB} = 6.0V	—	10	—	10	μA
I _{CE0}	V _{CE} = 400V	—	1.0	—	1.0	μA
I _{CE5}	V _{CE} = 250V	—	1.0	—	1.0	μA
h _{FE} †	V _{CE} = 5.0V, I _C = 1.0A	15	—	15	—	
h _{FE} †	V _{CE} = 5.0V, I _C = 500mA	40	120	25	75	
V _{CE(sat)} †	I _C = 1.0A, I _B = 0.1A	—	0.4	—	0.4	Volts
V _{BE(sat)} †	I _C = 1.0A, I _B = 0.1A	—	1.2	—	1.2	Volts
f _T	V _{CE} = 5.0V, I _C = 0.1A, f = 10MHz	20	—	20	—	MHz
C _{ob}	V _{CB} = 10V, f = 1MHz	—	60	—	60	pF
SWITCHING						
t _{on}	Resistive Load V _{CC} = 100V I _C = 500mA I _{B1} = I _{B2} = 15mA t _p = 10μs	—	0.25	—	—	μs
t _{off}		—	0.85	—	—	μs
t _{on}	Resistive Load V _{CC} = 100V I _C = 500mA I _{B1} = I _{B2} = 25mA t _p = 10μs	—	—	—	0.25	μs
t _{off}		—	—	—	1.2	μs

† JEDEC registered data. † Pulse conditions. Width = 300μs, Duty Cycle ≤ 2% (measured using Kelvin connections).