



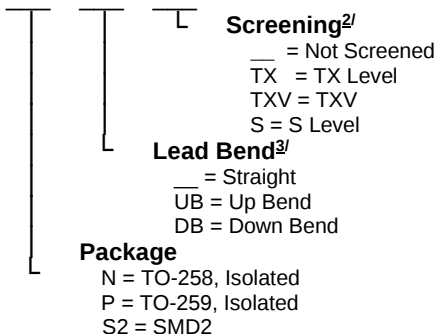
Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SSG60N60 Series

DESIGNER'S DATA SHEET

Part Number/Ordering Information^{1/} SSG60N60



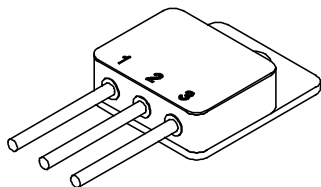
85 AMP / 600 Volts Fast Power IGBT

Features:

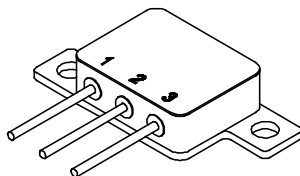
- 600 V IGBT Technology
- Positive Temperature Coefficient for Ease of Paralleling
- High Current Switching for Motor Drives and Inverters
- Low Saturation Voltage at High Currents
- Low Switching Losses
- High Short Circuit Capability
- MOS Input, Voltage Controlled
- Hermetic Sealed Construction
- TX, TXV, and S-Level Screening Available

Maximum Ratings	Symbol	Value	Unit
Collector – Emitter Voltage	V_{CEO}	600	V
Continuous Collector Current Average Diode Current	I_C	85 60	A
		@ $T_C = 25^\circ C$ @ $T_C = 100^\circ C$	
Peak Collector Current	$I_{C(pk)}$	200	A
Gate – Emitter Voltage	V_{GE}	± 20	V
Operating & Storage Temperature	T_J & T_{STG}	-65 to +200	$^\circ C$
Total Device Dissipation	P_D	350	W
		@ $T_C = 25^\circ C$	
Thermal Resistance Junction to Case	$R_{\theta JC}$	1.0 0.75	$^\circ C/W$
		N, P S2	

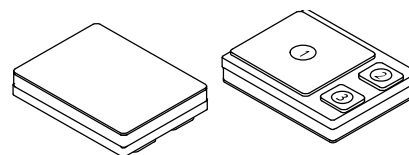
TO-258 (N)



TO-259 (P)



SMD2 (S2)



NOTES: *Pulse Test: Pulse Width = 300 μ sec, Duty Cycle = 2%.

^{1/} For ordering information, price, and availability - contact factory.

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

^{3/} Up and down bend configurations available for TO-258 (N) and TO-259 (P) packages only.

^{4/} Unless otherwise specified, all electrical characteristics @ $25^\circ C$.

NOTE: All specifications are subject to change without notification.
SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: TG0004C

DOCX



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638

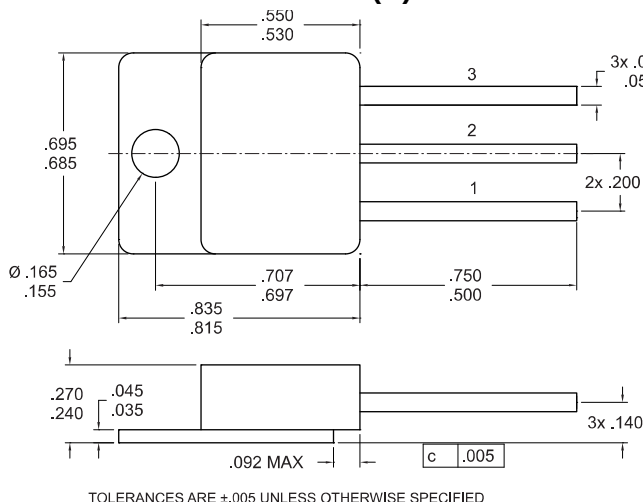
Phone: (562) 404-4474 * Fax: (562) 404-1773

ssdi@ssdi-power.com * www.ssdi-power.com

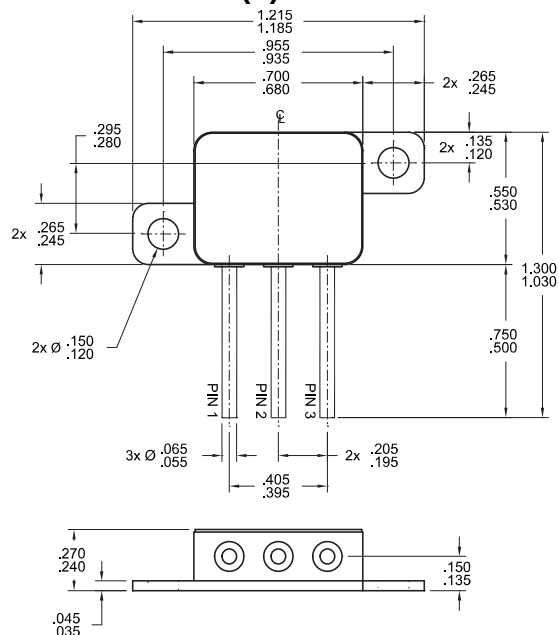
SSG60N60 Series

Electrical Characteristics ^{4/}		Symbol	Min	Typ	Max	Unit
Collector – Emitter Breakdown Voltage	$V_{GE} = 0\text{ V}, I_C = 250\text{ }\mu\text{A}$	$V_{(BR)CES}$	600	—	—	V
Collector – Emitter Saturation Voltage	$V_{GE} = 15\text{ V}, I_C = 60\text{ A}$	$V_{CE(SAT)}$	—	2.0	2.5	V
Gate – Emitter Threshold Voltage	$V_{GE} = V_{CE}, I_C = 250\text{ mA}$	$V_{GE(th)}$	3	—	6.5	V
Zero Gate Voltage Collector Current	$T_J = 25^\circ\text{C}$ $V_{CE} = 600\text{ V}, V_{GE} = 0\text{ V}$ $T_J = 150^\circ\text{C}$	I_{CES}	—	0.5 0.35	250 5.0	μA mA
Gate – Emitter Leakage Current	$V_{GE} = 20\text{ V}, V_{CE} = 0\text{ V}$	I_{GES}	—	10	100	nA
Input Capacitance	$V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}, f = 1\text{ MHz}$	C_{ISS}	—	4000	—	pF
Output Capacitance	$V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}, f = 1\text{ MHz}$	C_{OSS}	—	300	—	pF
Reverse Transfer Capacitance	$V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}, f = 1\text{ MHz}$	C_{RSS}	—	55	—	pF
Turn on Delay Time	$V_{CC} = 400\text{ V}, I_C = 50\text{ A}_{DC}$, $V_{GE} = 15\text{ V}, t_P = 10\text{ }\mu\text{sec}$, Duty Cycle $\leq 1\%$	$t_{d(on)}$	—	85	—	nsec
Rise Time		t_r	—	140	—	
Turn off Delay Time		$t_{d(off)}$	—	300	—	
Fall Time		t_f	—	150	—	

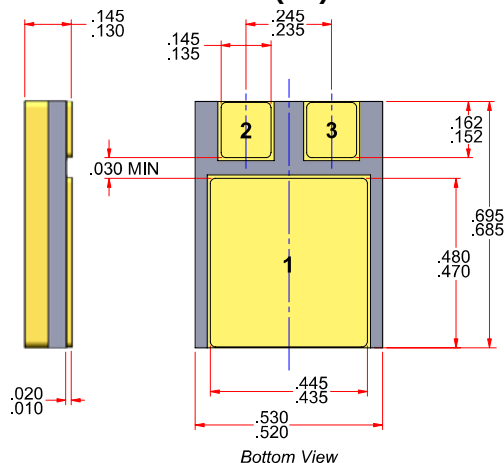
TO-258 (N)



TO-259 (P)



SMD2 (S2)



Available Part Numbers:

SSG60N60N, SSG60N60NUB, SSG60N60NDB,
SSG60N60P, SSG60N60PUB, SSG60N60PDB, SSG60N60S2

PIN ASSIGNMENT (Standard)

Package	Collector	Emitter	Gate
TO-258 (N)	Pin 1	Pin 2	Pin 3
TO-259 (P)	Pin 1	Pin 2	Pin 3
SMD2 (S2)	Pin 1	Pin 2	Pin 3

NOTE: All specifications are subject to change without notification.
SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: TG0004C

DOCX