



Solid State Devices, Inc.

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SSG200EF60E

ELECTRICAL CHARACTERISTICS ^{3/}	SYMBOL	MIN	TYP	MAX	UNIT	
Collector - Emitter Breakdown Voltage ($I_{CES} = 250\mu A, V_{GE} = 0V$)	BV_{CES}	600	—	—	V	
Gate - Emitter Threshold Voltage ($I_C = 5mA, V_{CE} = V_{GE}$)	$V_{GE(th)}$	2.5	5.5	6	V	
Collector - Emitter Saturation Voltage $I_C = 100A @ 25^\circ C$ $I_C = 100A @ 100^\circ C$	$V_{CE(sat)}$	—	1.65 1.8	2.0 2.4	V	
Gate - Emitter Leakage Current ($V_{GE} = \pm 20V, V_{CE} = 0V$)	I_{GES}	—	0.01	1.0	μA	
Collector Leakage Current ($V_{CE} = 480V, V_{GE} = 0V, T_J = 25^\circ C$) ($V_{CE} = 600V, V_{GE} = 0V, T_J = 25^\circ C$) ($V_{CE} = 480V, V_{GE} = 0V, T_J = 125^\circ C$)	I_{CES1} I_{CES2} I_{CES3}	—	10 40 4	— 200 10	μA μA mA	
Forward Transconductance ($I_C = I_{C2}, V_{CE} = 10V$)	g_{fs}	40	—	—	S	
Gate Charge Total Gate Charge Gate-Emitter Charge Gate-Collector Charge	$V_{GE} = 15V$ $I_C = 10A$ $V_{CE} = 300V$	$Q_{g(on)}$ Q_{ge} Q_{gc}	— — —	575 70 320	650 150 370	nC
Capacitance Input Capacitance Output Capacitance Reverse Transfer Capacitance	$V_{GE} = 0V$ $V_{CE} = 25V$ $f = 1 MHz$	C_{ies} C_{oes} C_{res}	— — —	8400 1400 600	15,000 2,000 1,000	pF
Inductive Switching Turn-On Delay Time Rise Time Turn-Off Delay Time Fall Time	$V_{GE} = 15V$ $I_C = 45A$ $R_G = 10\Omega$ $L = 100\mu H$	$t_{d(on)}$ t_r $t_{d(off)}$ t_f	— — — —	150 140 600 300	500 175 1000 500	nsec
ANTI-PARALLEL DIODE						
Peak Current	I_{pk}	—	—	200	A	
Peak Inverse Voltage	P_{IV}	—	—	600	V	
Average Current	I_{avg}	—	—	100	A	
Diode Forward Voltage @ $I_F=100A, T_J=25^\circ C$	V_F	—	1.1	1.5	V	
Reverse Recovery Time ($I_f=40A, di/dt=200A/\mu sec$)	t_{rr}	—	200	400	nsec	

PACKAGE OUTLINE: MILPACK3

PIN OUT:
 PIN 1: COLLECTOR
 PIN 2: EMITTER
 PIN 3: GATE
 PIN 4: EMITTER

