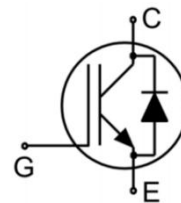


V_{CES}	1200V
I_C	80A
$V_{CE(sat)}$	1.7V



Trench FS technology offering
 High speed switching
 Low gate charge and $V_{CE(sat)}$
 High ruggedness, temperature stable behavior
 Maximum junction temperature 175°C



Solar Inverters
 Uninterruptible power supplies
 Motor drives
 Air condition

V_{CES}	Collector-Emitter Voltage	1200	V
V_{GES}	Gate- Emitter Voltage	30	V
I_C	Collector Current	160	A
	Collector Current @ $T_C = 100\text{ }^\circ\text{C}$	80	
I_{Cpuls}	Pulsed Collector Current t_p limited by T_{Jmax}	320	
-	Turn off safe operating area $V_{CE}=1200V$ $T_J=175^\circ\text{C}$	320	
I_F	Diode Continuous Forward Current @ $T_C = 100\text{ }^\circ\text{C}$	80	
I_{FM}	Diode Maximum Forward Current	320	
P_D	Power Dissipation @ $T_C = 25^\circ\text{C}$	833	W
	Power Dissipation @ $T_C = 100^\circ\text{C}$	417	W
T_J T_{STG}	Operating Junction and Storage Temperature Range	-55 to +175	$^\circ\text{C}$
T_L	Maximum Temperature for Soldering	260	$^\circ\text{C}$

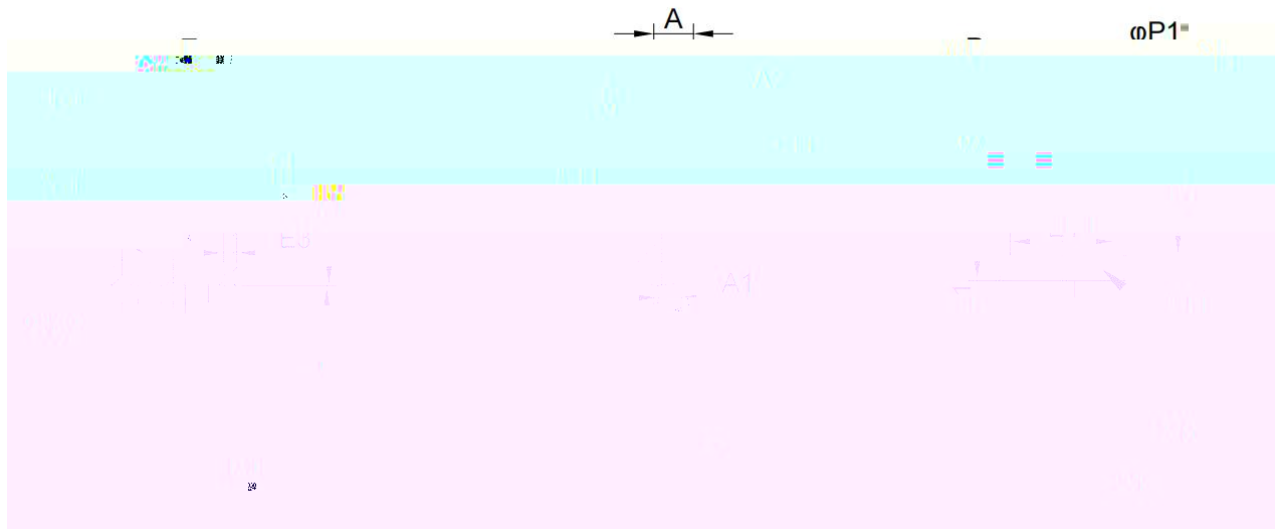
R _{JC}	Thermal Resistance, Junction-to-case for IGBT	—	0.18	°C/W	
	Thermal Resistance, Junction-to-case for Diode	—	0.4	°C/W	
R _{JA}	Thermal Resistance, Junction-to-ambient	—	40	°C/W	

@ T_A=25°C unless otherwise specified

V _{(BR)CES}	Collector-Emitter Breakdown Voltage	1200	—	—	V	V _{GE} =0V, I _{CE} =1mA
V _{CE(sat)}	Collector-Emitter Saturation Voltage	—	1.7	1.95	V	I _C =80A, V _{GE} =15V @ T _J 25°C
		—	1.95	—		I _C =80A, V _{GE} =15V @ T _J 175°C
V _{GE(th)}	Gate Threshold Voltage	4.5	—	6	V	I _C =3mA, V _{CE} =V _{GE}
I _{CES}	Collector-Emitter Leakage Current	—	—	400	μA	V _{GE} =0V, V _{CE} =1200V
I _{GES}	Gate to Emitter Reverse Leakage	—	—	200	nA	V _{GE} =30V, V _{CE} =0V
		—	—	-200		V _{GE} =-30V, V _{CE} =0V
C _{ies}	Input capacitance	—	9745	—	pF	V _{GS} = 0V
C _{oes}	Output capacitance	—	325	—		V _{DS} = 30V
C _{res}	Reverse transfer capacitance	—	270	—		f = 1MHz
t _{d(on)}	Turn-on delay time	—	20	—	ns	V _{CC} =600V, I _C =80A, V _{GE} =0/15V, R _g =8
t _r	Rise time	—	17	—		
t _{d(off)}	Turn-Off delay time	—	170	—		
t _f	Fall time	—	18	—		
E _{on}	Turn-On Switching Loss	—	5.5	—	mJ	V _{CC} =600V, I _C =40A, V _{GE} =0/15V, R _g =8
E _{off}	Turn-Off Switching Loss	—	2.5	—		
E _{ts}	Total Switching Loss	—	8	—		
Q _g	Total Gate Charge	—	570	—	nC	V _{CC} =960V, I _C =75A, V _{GE} =15V
Q _{ge}	Gate to Emitter Charge	—	70	—		
Q _{gc}	Gate to Collector Charge	—	370	—		

@ T_A=25°C unless otherwise specified

V _{FM}	Diode Forward Voltage	—	2.2	2.8	V	I _F =80A
t _{rr}	Reverse Recovery Time	—	180	—	ns	T _J = 25°C, I _F =37.5A, di/dt = 800A/μs
Q _{rr}	Reverse Recovery Charge	—	4.2	—	μC	
I _{RRM}	Diode Peak Reverse Recovery Current	—	30	—	A	



TO247-3L						
	Min	Typ	Max	Min	Typ	Max
D2	0.95	1.17	1.35			
E	15.48	15.88	16.28			

Any and all Silikron products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your Silikron representative nearest you before using any Silikron products described or contained herein in such applications.

Silikron assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all Silikron products described or contained herein.

Specifications of any and all Silikron products described or contained