

BRGB75P65AHA

Rev.A Jan.-2026

/ Descriptions

TO-247

Insulated-Gate Bipolar Transistor in a TO-247 Plastic Package.

/ Features

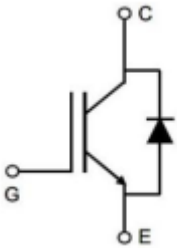
650V 75A

$V_{CE(SAT)} = 1.90V(\text{typ.}) @ V_{GE} = 15V, I_C = 75A$

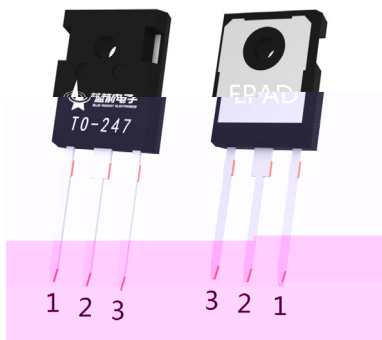
/ Applications

Solar Converters, Uninterrupted Power Supply, Welding Converters, Mid to High Range Switching Frequency Converters.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 EPAD C PIN 3 E

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25$)

Parameter	Symbol	Rating	Unit	
Collector-Emitter Voltage	V_{CES}	650	V	
Gate-Emitter Voltage	V_{GES}	f 30	V	
Continuous Collector Current	I_C	$T_C=25$	150	A
		$T_C=100$	75	A
Pulsed Collector Current , Limited by T_{Jmax}	I_{CM}	300	A	
Continuous Diode Forward Current	I_F	$T_C=25$	160	A
		$T_C=100$	80	A
Power Dissipation	P_D	$T_C=25$	750	W
		$T_C=100$	375	W
Operating Junction Temperature Range	T_J	-40 to +175		
Storage Temperature Range	T_{STG}	-55 to +150		
Maximum Junction-to-Ambient	R_{JA}	80	/W	
Maximum IGBT Junction-to-Case	R_{JC}	0.20	/W	
Maximum Diode Junction-to-Case	R_{JC}	0.55	/W	

/ Electrical Characteristics($T_c=25$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	BV_{CES}	$I_C=250\mu A, V_{GE}=0V$	650			V
Zero Gate Voltage Collector current	I_{CES}	$V_{CE}=650V, V_{GE}=0V$			250	μA
Gate-Emitter Leakage Current	I_{GES}	$V_{CE}=0V, V_{GE}= \pm 30V$			f 100	nA
Gate-Emitter Threshold Voltage	$V_{GE(th)}$	$V_{CE}=V_{GE}, I_C=250 A$	4.0	5.0	5.5	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$V_{GE}=15V, I_C=75A$	$T_J=25$	1.90	2.20	V
			$T_J=125$	2.00		
Total Gate Charge	Q_g	$V_{GE}=15V, V_{CE}=480V, I_C=75A$		200		nC
Gate to Emitter Charge	Q_{ge}			20		
Gate to Collector Charge	Q_{gc}			32		

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Ø □ =) ϕ / Package Dimensions

, M y f / Marking Instructions

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Note:

BR: Company Code

GB75P65AHA: Product Type Code

****: Lot No. Code, code change with Lot No

G PD t... • Ž ϕ (x /) / Temperature Profile for Dip Soldering(Pb-Free)

^a ϕ y

1o• Ä ½ “ † 25 ½150 - k ž • 60 ½90sec;

2o• Q › “ † 255 r5 - k ž • 4 Ò 5 r0.5sec;

3o•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

1.Preheating:25~150 - , Time:60~90sec.

2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 270 r5 -

ž • y 10 r1 sec.

Temp.:270±5

Time:10±1 sec

G P á / Packaging SPEC.

ì ' x / TUBE