

### Features

- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ For use in low voltage, high frequency inverter, Free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



### Mechanical Data

- ✧ Case: D<sup>2</sup>PAK molded plastic body
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in. - lbs, max
- ✧ Weight: 1.41 grams

### Ordering Information

Part No.	Package	Packing	Packing code	Packing code (Green)
UGS5J	D2PAK	800 / 13" REEL	RN	RNG

### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	UGS5J	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	V
Maximum RMS Voltage	$V_{RMS}$	420	V
Maximum DC Blocking Voltage	$V_{DC}$	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	65	A
Maximum Instantaneous Forward Voltage (Note 1) @ 5 A / $T_A=25^{\circ}C$ @ 5 A / $T_A=125^{\circ}C$	$V_F$	2.0 1.8	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	$I_R$	20 250	uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	20	nS
Typical Thermal Resistance	$R_{\theta JC}$	3	$^{\circ}C/W$
Operating Temperature Range	$T_J$	- 55 to + 150	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	- 55 to + 150	$^{\circ}C$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

RATINGS AND CHARACTERISTIC CURVES (UGS5J)

FIG.1 FORWARD CURRENT DERATING CURVE

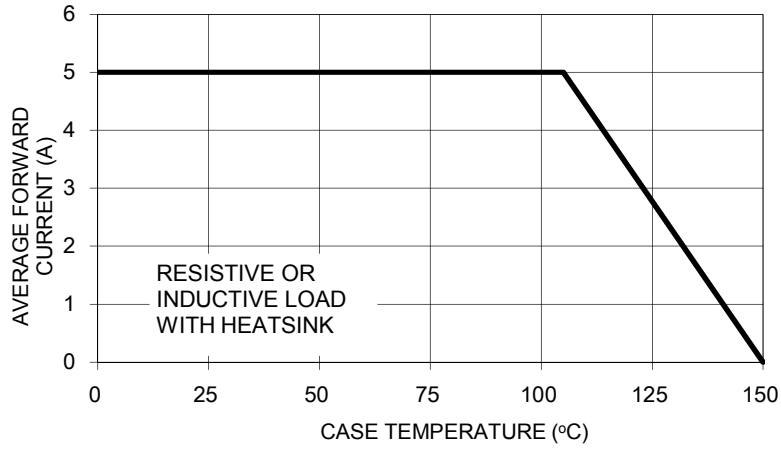


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

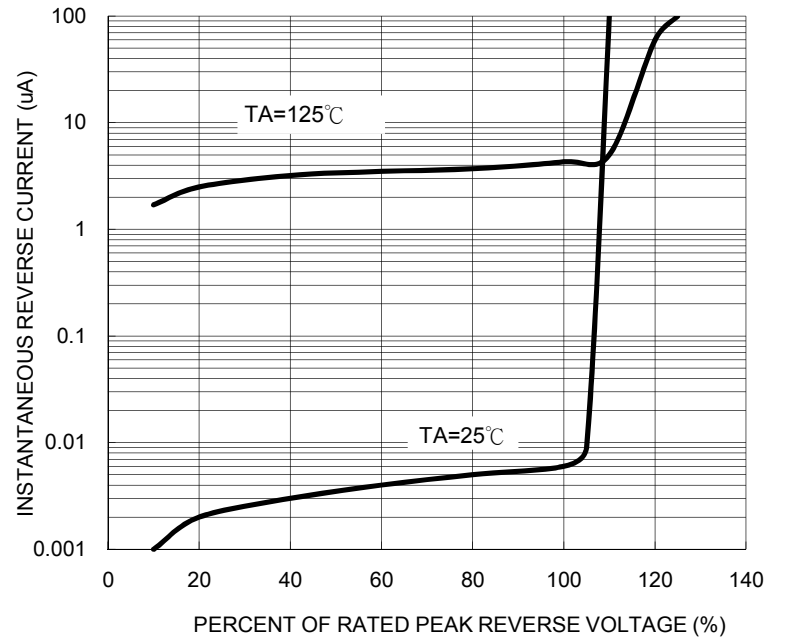


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

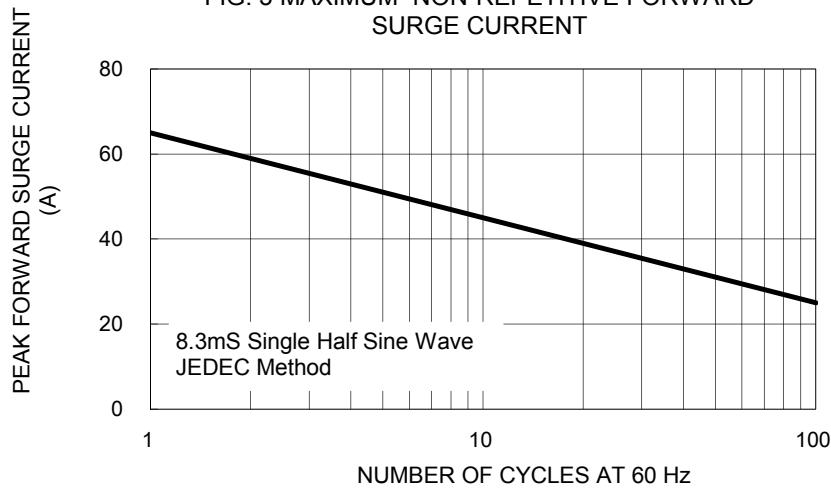


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

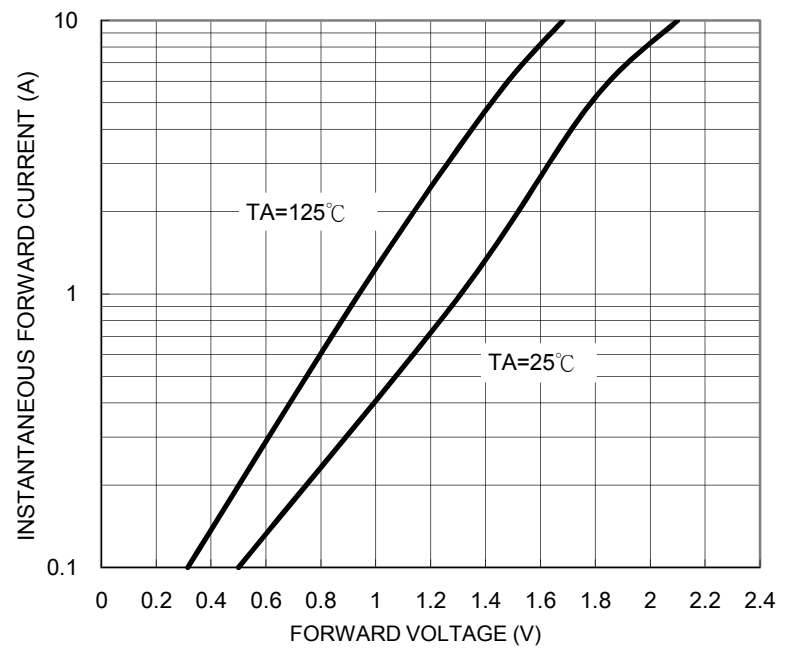
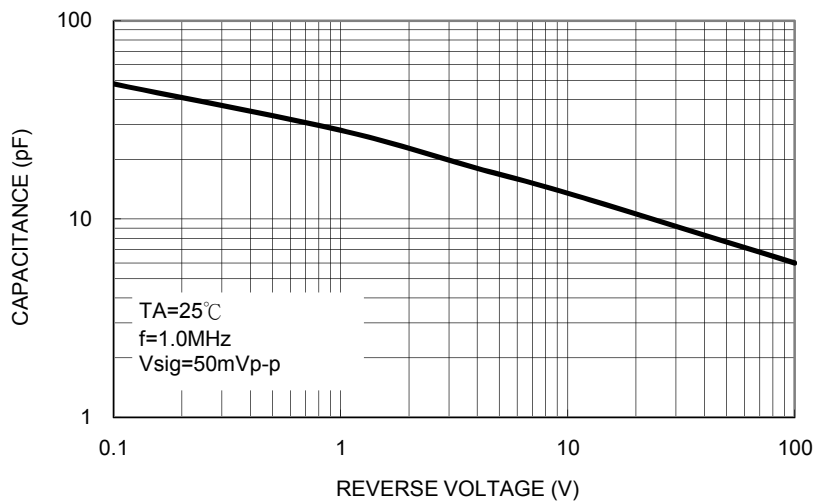
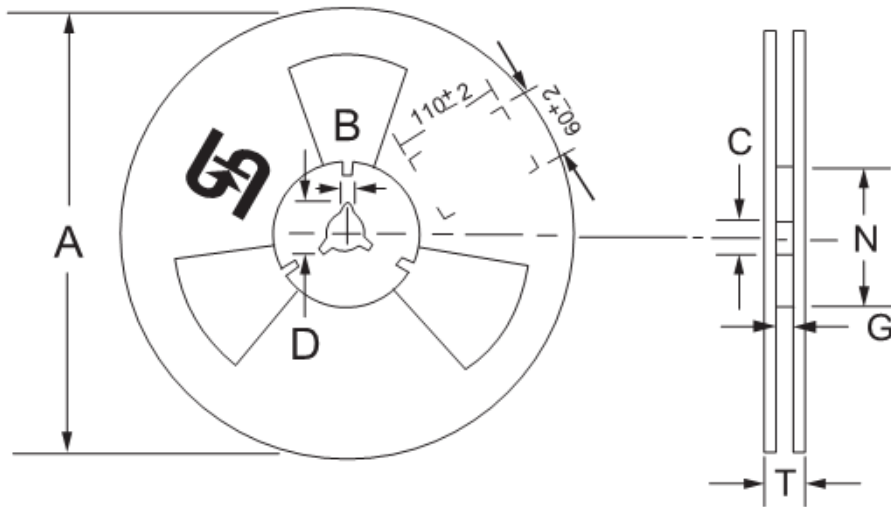
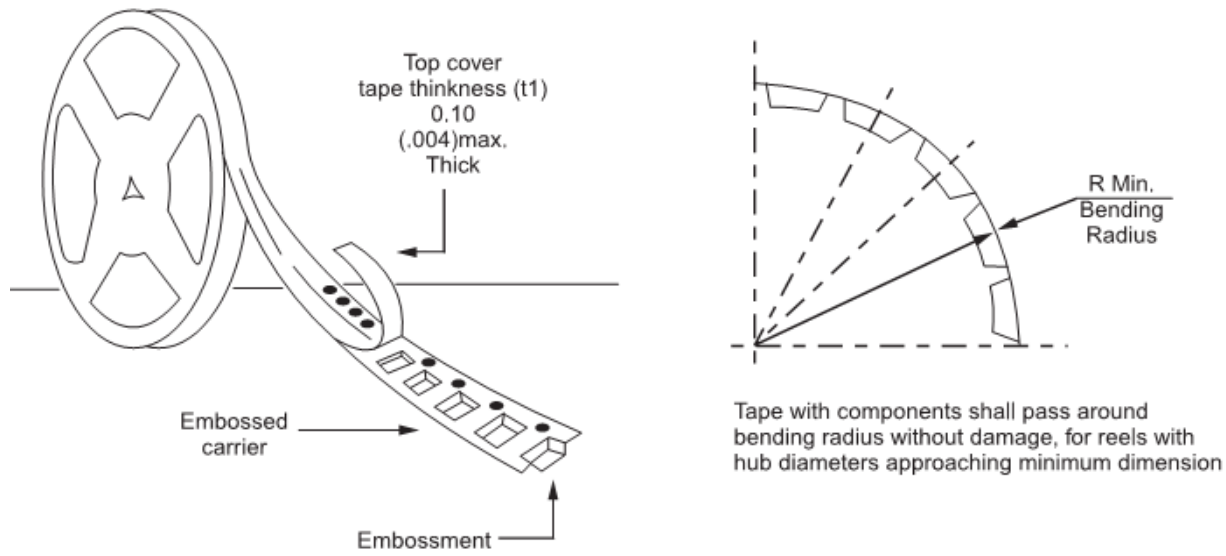


FIG. 5 TYPICAL JUNCTION CAPACITANCE



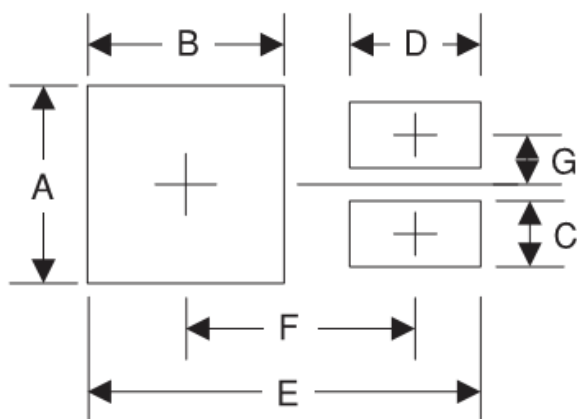
### Tape & Reel specification



Reel Size	Tape Size	A	B	C	D	N	G	T
		max	±0.5	±0.5	min	±0.5	+2.0;-0	max
13"	24mm	330	2	13	20.2	75	24.4	30.4

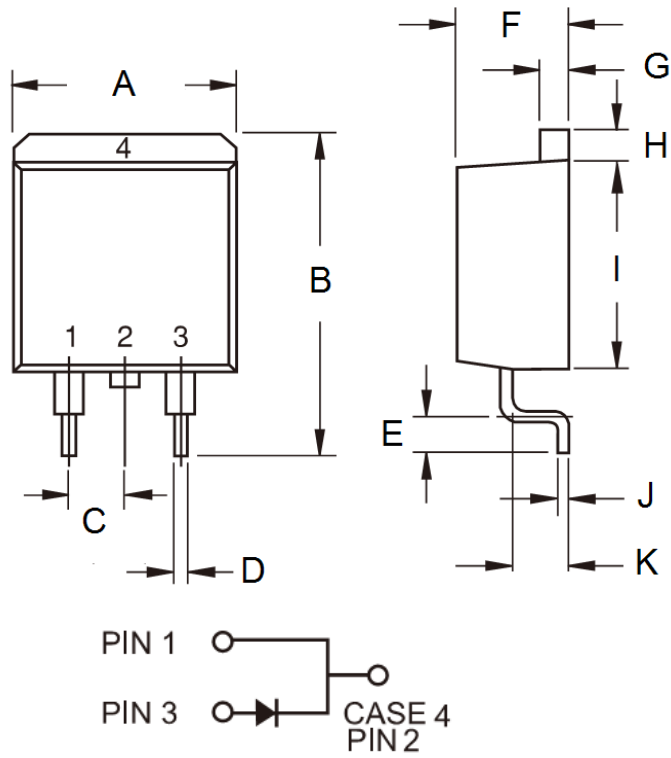
Unit (mm)

### Suggested PAD Layout



Symbol	Unit(mm)
A	10.8
B	7
C	1.1
D	3.5
E	16.9
F	9.5
G	2.5

### Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	-	10.5	-	0.413
B	14.60	15.88	0.575	0.625
C	2.41	2.67	0.095	0.105
D	0.68	0.94	0.027	0.037
E	2.29	2.79	0.090	0.110
F	4.44	4.70	0.175	0.185
G	1.14	1.40	0.045	0.055
H	1.14	1.40	0.045	0.055
I	8.25	9.25	0.325	0.364
J	0.36	0.53	0.014	0.021
K	2.03	2.79	0.080	0.110

### Marking Diagram



- P/N = Specific Device Code
- G = Green Compound
- YWW = Date Code