DSK Diode Semiconductor Korea ***HER510B--- HER560B***

HIGH EFFICIENCY RECTIFIERS

VOLTAGE RANGE: 100 --- 600 V
CURRENT: 5.0 A

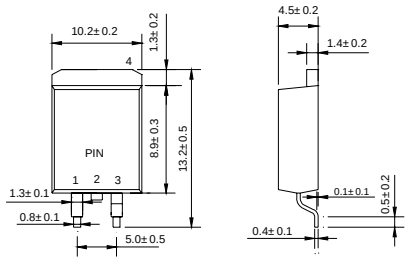
FEATURES

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol,Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case:JEDEC D²PAK,molded plastic body
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.087 ounces,2.2 grams
- ◇ Mounting position: Any

D²PAK



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

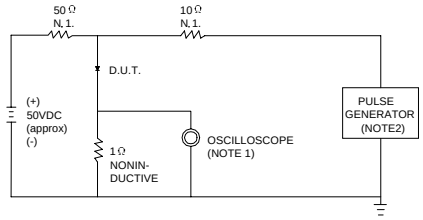
		HER 510B	HER 520B	HER 540B	HER 560B	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	100	200	400	600	V
Maximum average forward rectified current 9.5mm lead length, @T_C=75℃	$I_{F(AV)}$	5.0				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T_J=125℃	I_{FSM}	100				A
Maximum instantaneous forward voltage @ 5.0A	V_F	1.0		1.3	1.7	V
Maximum reverse current @T_A=25℃	I_R	10				μA
at rated DC blocking voltage @T_A=100℃		150				
Maximum reverse recovery time (Note1)	t_{rr}	50			100	ns
Typical junction capacitance (Note2)	C_J	40				pF
Typical thermal resistance (Note3)	$R_{\theta JC}$	20				℃/W
Operating junction temperature range	T_J	- 55 ---- + 150				℃
Storage temperature range	T_{STG}	- 55 ---- + 150				℃

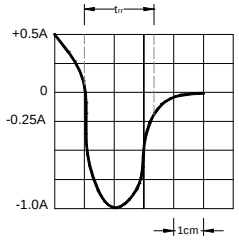
NOTE: 1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3.Thermal resistance junction to ambient.

FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC





NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ.22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 20/45 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

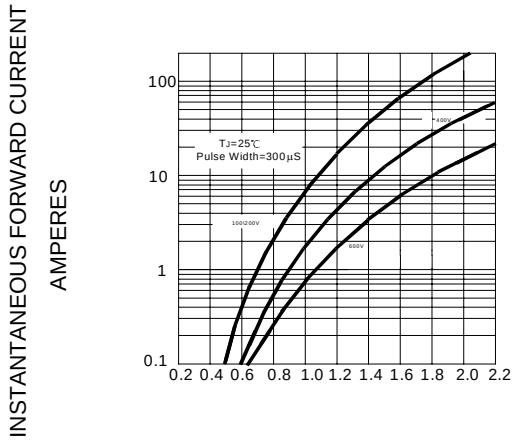


FIG.3 -- FORWARD DERATING CURVE

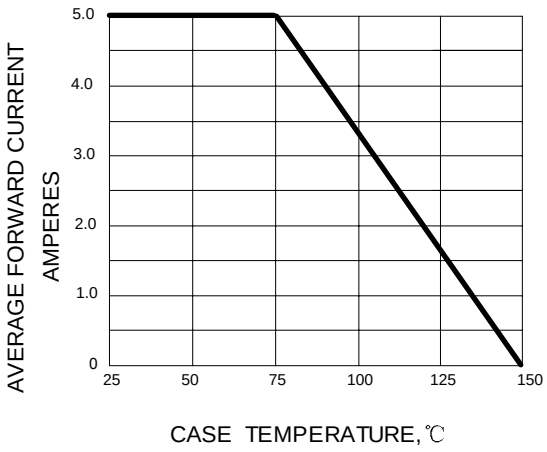


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

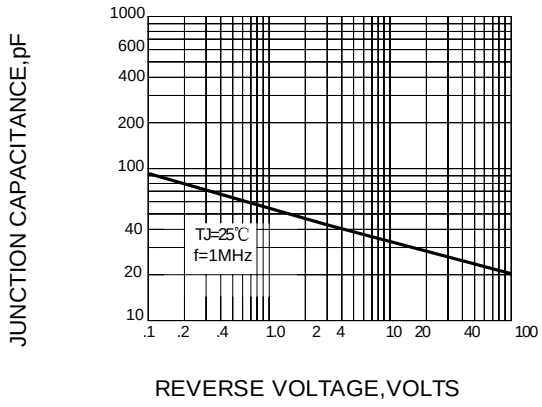


FIG.5 -- PEAK FORWARD SURGE CURRENT