Features

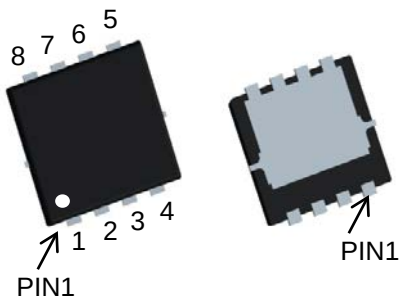
- V_{RRM}= 60V
  $I_{F(AV)}$=2x 10A

- HEBR® Technology
- Ultra-Low Forward Voltage Drop
- Low Power Loss and High Efficiency
- High Surge Capability
- Low Leakage Current
- Lead Free and Green Devices Available

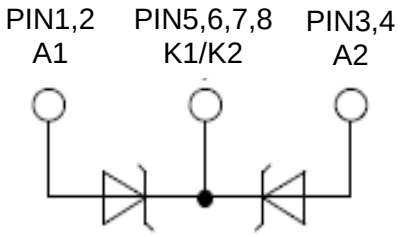
Applications

- Rectifiers in SMPS
- AC/DC Adaptors
- DC-DC Converters

Pin Description



PDFN5060



High Efficiency Barrier Rectifier

Absolute Maximum Ratings

Symbol	Parameter		Rating	Unit
Common Ratings (T_A=25°C Unless Otherwise Noted)				
V_{RRM} ①	Maximum Repetitive Reverse Voltage		60	V
V_R ①	Maximum DC Reverse Voltage		60	V
$V_{R(RMS)}$ ①	RMS Reverse Voltage		42	V
$I_{F(AV)}$	Average Rectified Forward Current, T_C=130°C	per Device	20	A
		per Diode	10	A
I_{FSM}	Peak Forward Surge Current,8.3ms Half Sine Wave		340	A
T_{STG}	Storage Temperature Range		-55 to 150	°C
T_J	Operating Junction Temperature Range		-55 to 150	°C
Mounted on Large Heat Sink				
$R_{\theta JC}$	Thermal Resistance-Junction to Case		1.2	°C/W
$R_{\theta JA}$ ②	Thermal Resistance-Junction to Ambient		30	°C/W

Electrical Characteristics (T_A=25°C Unless Otherwise Noted)

Symbol	Parameter	Test Condition	RUS6020M			Unit
			Min.	Typ.	Max.	
Static Characteristics						
$V_{(BR)R}$ ③	Reverse Breakdown Voltage per Diode	I_R=300μA	60			V
I_R ③	Reverse Leakage Current per Diode	V_R=60V, T_C=25°C		100	300	μA
		V_R=60V, T_C=125°C			5	mA
V_F ③	Forward Voltage Drop per Diode	I_F=2A, T_C=25°C		0.33	0.36	V
		I_F=5A, T_C=25°C		0.40	0.44	V
		I_F=10A, T_C=25°C		0.49	0.53	V
		I_F=10A, T_C=125°C		0.45	0.49	V

Notes:

①For T_A > 25°C the derating of V_R and I_F has to be considered.

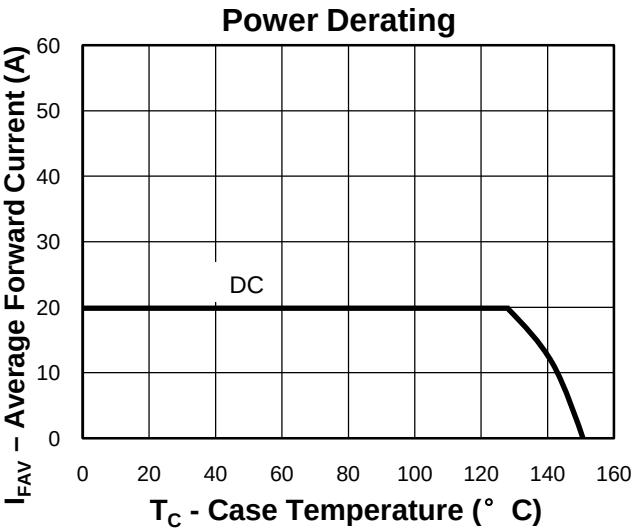
②Polymide PCB, 2oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm.

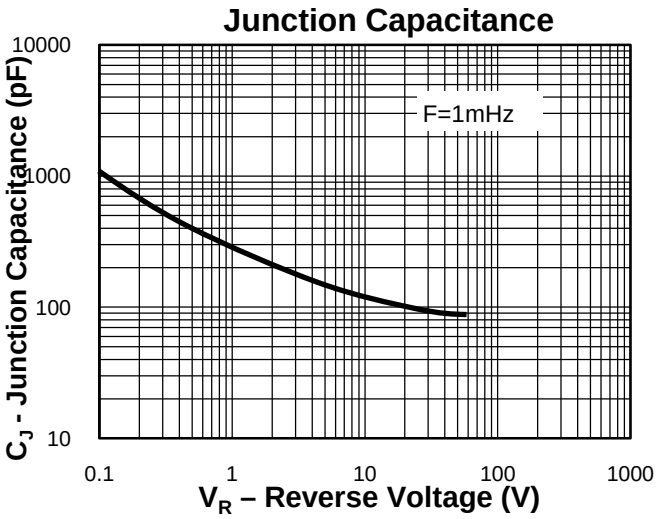
③Pulse test, pulse width≤300μs, duty cycle≤2%.

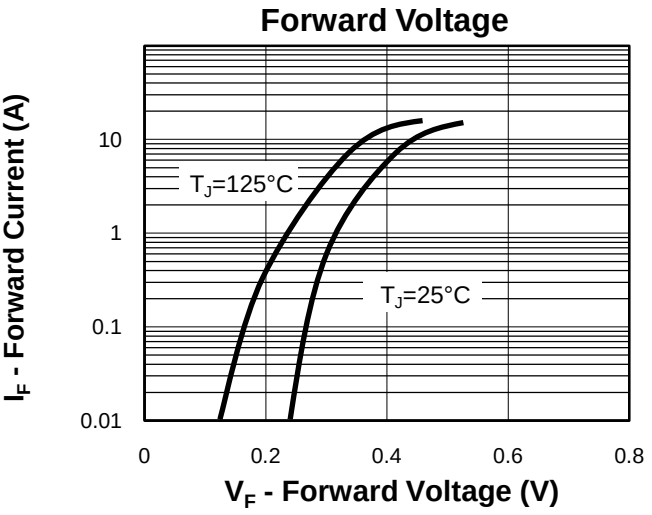
Ordering and Marking Information

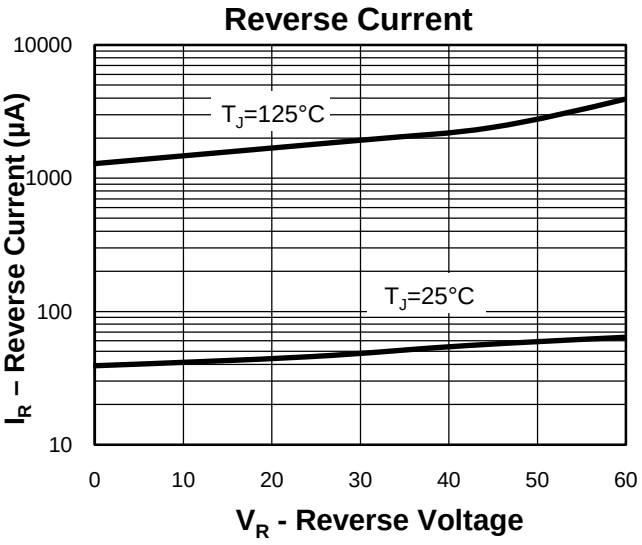
Device	Marking	Package	Packaging	Quantity	Reel Size	Tape width
RUS6020M	RUS6020M	PDFN5060	Tape&Reel	3000	13''	12mm

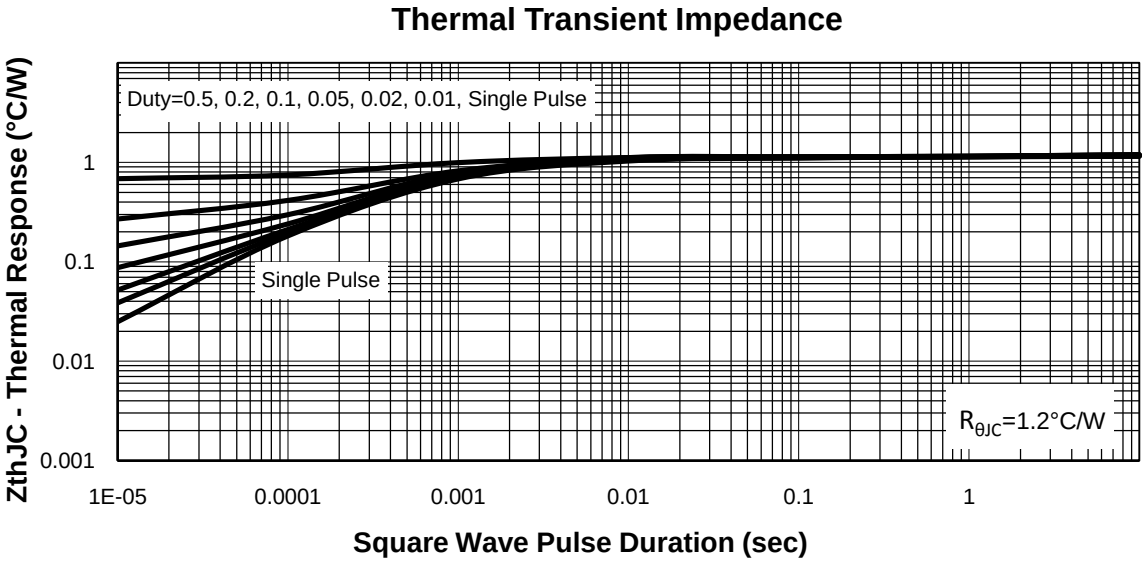
Typical Characteristics





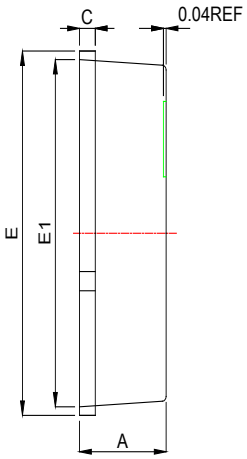


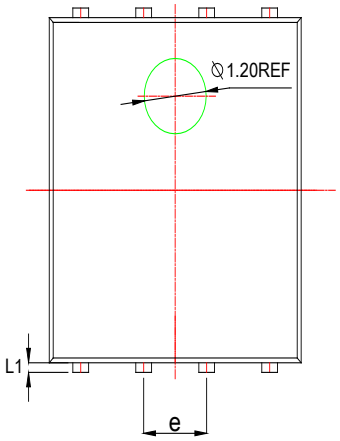


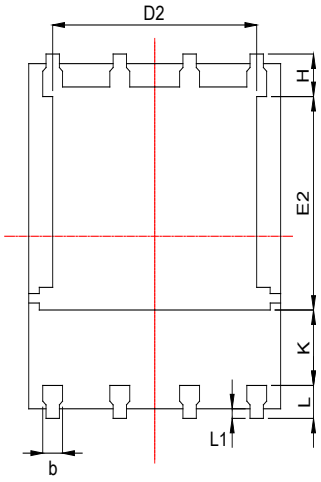


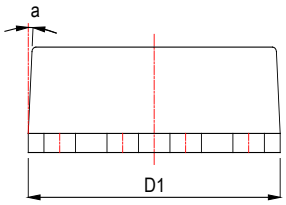
Package Information

PDFN5060

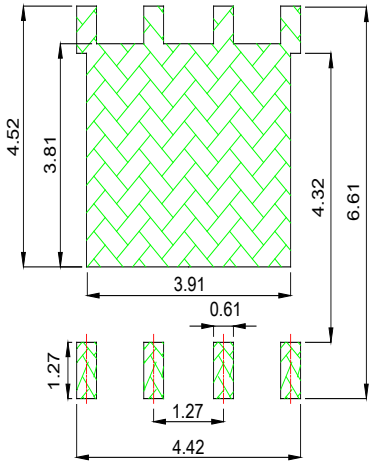








Land Pattern
(Only for Reference)



SYMBOL	MM			INCH		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.90	1.00	1.10	0.035	0.039	0.043
b	0.33	0.42	0.51	0.013	0.017	0.020
c	0.20	0.25	0.30	0.008	0.010	0.012
D1	4.80	4.90	5.00	0.189	0.193	0.197
D2	3.61	3.79	3.96	0.142	0.149	0.156
E	5.90	6.00	6.10	0.232	0.236	0.240
E1	5.65	5.75	5.85	0.222	0.226	0.230
E2	3.38	3.58	3.78	0.133	0.141	0.149
e	1.27 BSC			0.005 BSC		
H	0.41	0.51	0.61	0.016	0.020	0.024
k	1.10			0.043		
L	0.51	0.61	0.71	0.020	0.024	0.028
L1	0.06	0.13	0.20	0.002	0.005	0.008
a	0°		12°	0°		12°

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