STD60160Y

Rectifier Diode

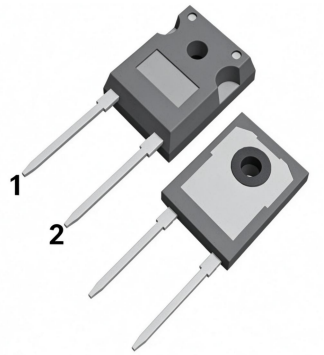
重庆平伟半导体股份有限公司
CHONGQING PINGWEI SEMICONDUCTOR CO., LTD.

60A,1600V

Feature

- Low forward voltage drop
- High current capability
- Low power loss, high efficiency
- High surge current capability
- High junction temperature
- High temperature soldering guaranteed: 260°C /10seconds, 0.25"(6.35mm)from case
- For surface mounted application
- Easy pick and place
- RoHS 2.0 Compliant

TO-247-2L

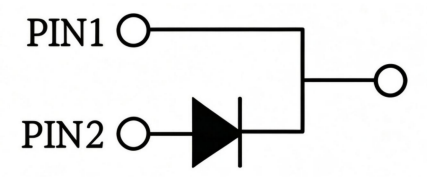


Mechanical Data

- Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- Mounting position: any

Key Performance Parameters

Parameter	Values	Unit
$I_{F(AV)}$	60	A
V_{RRM}	1600	V
T_J	150	℃
V_F(max)	1.50	V
I_{FSM}	1000	A



Package Marking and Ordering Information

Part #	Marking	Package	Packing	Reel Size	Tape Width	Qty
STD60160Y	STD60160Y	TO-247-2L	Tube	N/A	N/A	30pcs

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Absolute Maximum Ratings (T_J=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1600	V
Maximum RMS Voltage	V_{RMS}	1120	V
Maximum DC blocking Voltage	V_{DC}	1600	V
Maximum Average Forward Rectified Current *TC = 100 ℃*	$I_{F(AV)}$	60	A
Non-Repetitive Peak Forward Surge Current T_J=25℃,t_p=8.3 ms, Half Sine Pulse	I_{FSM}	1000	A
Operating junction and storage temperature	T_J,T_{stg}	-55 to +150	℃

Thermal Resistance

Parameter	Symbol	Condition	Value			Unit
			min.	typ.	max.	
Thermal resistance, junction - case	R_{thJC}	-	-	-	1.0	℃/W
Thermal resistance, junction - ambient(min. footprint)	R_{thJA}	-	-	-	50.0	℃/W

Electrical Characteristic

Static Characteristic (T_J=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Value			Unit
			min.	typ.	max.	
Reverse breakdown voltage	V_{RRM}	I_R=100uA	1600	-	-	V
Forward voltage	V_F	I_F=60A,T_J=25°C	-	1.05	1.50	V
		I_F=60A,T_J=125°C	-	-	1.30	V
Reverse current	I_R	V_R=1600V,T_J=25°C	-	-	10	μA
		V_R=1600V,T_J=125°C	-	-	500	

Dynamic Characteristic (T_J=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Value			Unit
			min.	typ.	max.	
Total capacitance	C_J	V_R=4V,f=1MHz	-	250	-	pF

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Typical Performance Characteristics

Fig 1:Forward Current Derating Curve

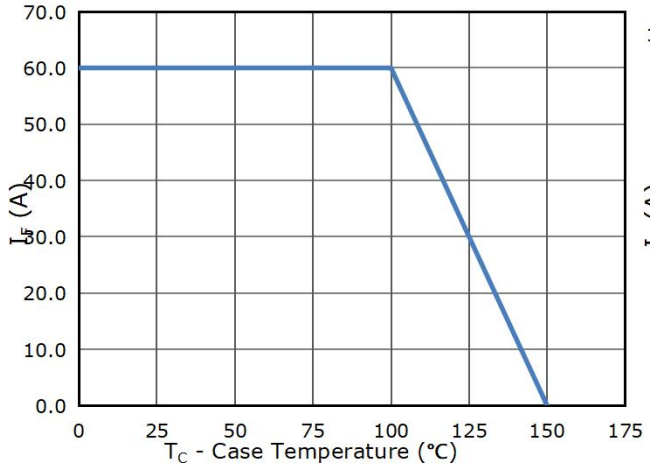


Fig 2: Forward Characteristics

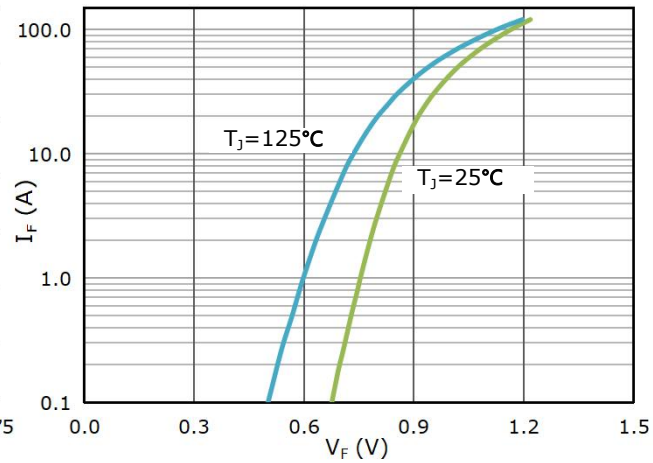


Fig 3: Maximun Non-repetitive Forward Surge Current

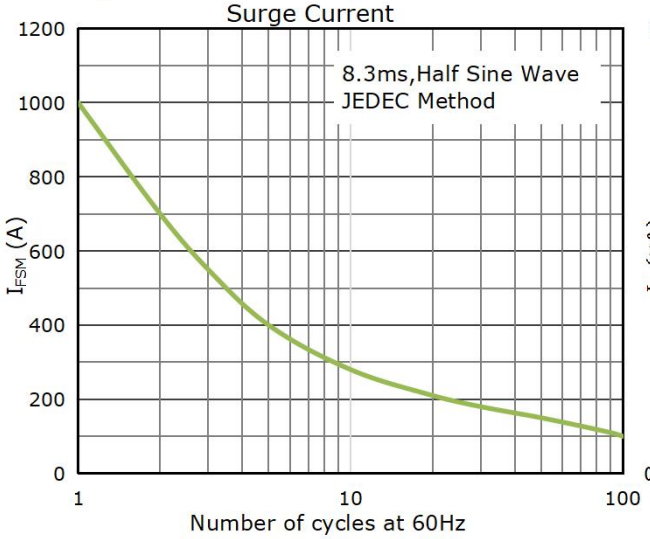
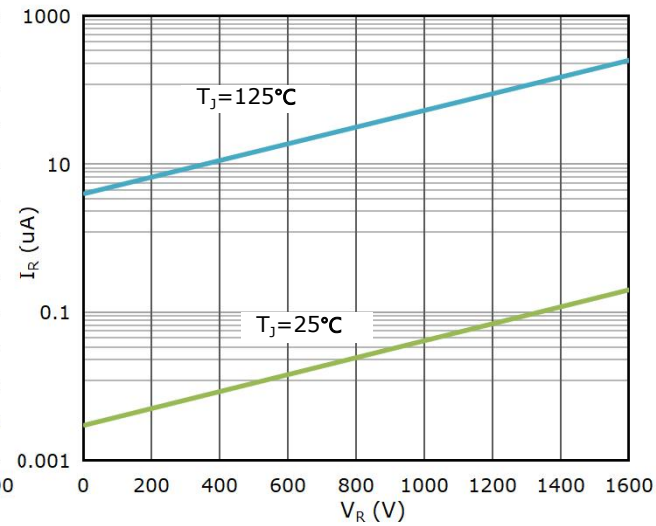
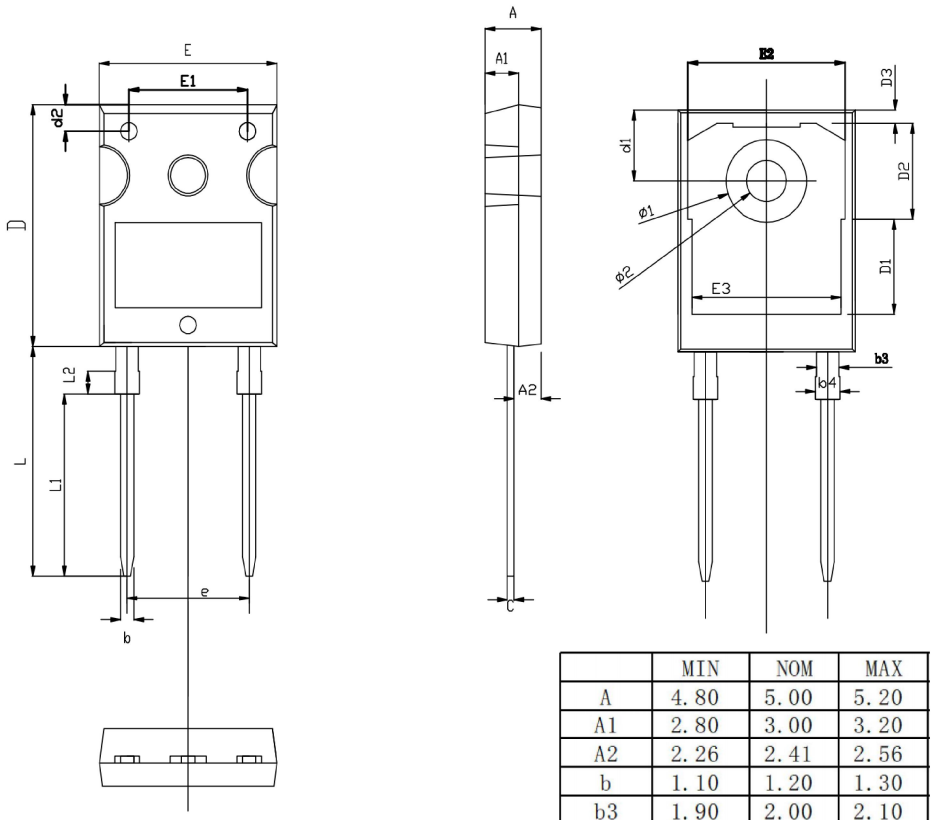


Fig 4: Reverse Characteristics

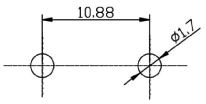


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Package Outline: TO-247-2L



RECOMMENDED LAND PATTERN



UNIT: mm

	MIN	NOM	MAX
A	4.80	5.00	5.20
A1	2.80	3.00	3.20
A2	2.26	2.41	2.56
b	1.10	1.20	1.30
b3	1.90	2.00	2.10
b4	2.00	-	2.20
c	0.50	0.60	0.70
D	20.80	21.00	21.20
D1		8.23	
D2		8.32	
D3		1.17	
d1	6.00	6.15	6.30
d2	2.20	2.30	2.40
E	15.60	15.80	16.00
E1		10.50	
E2		14.02	
E3		13.50	
e		10.88	
L	19.72	19.92	20.12
L1		15.79	
L2		1.98	
ø1	7.10	7.19	7.30
ø2	3.50	3.60	3.70

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