MUR3030BS

Ultrafast Recovery Diode

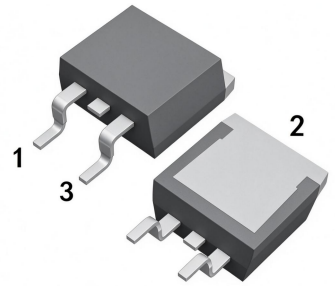
重庆平伟半导体股份有限公司
CHONGQING PINGWEI SEMICONDUCTOR CO., LTD.

30A,300V

Feature

- Ultrafast,soft recovery
- High frequency operation
- Very low I_R value
- Low forward voltage drop
- High junction temperature
- Epitaxial chip construction
- Low power loss, high efficiency
- RoHS 2.0 Compliant

TO-263-2L

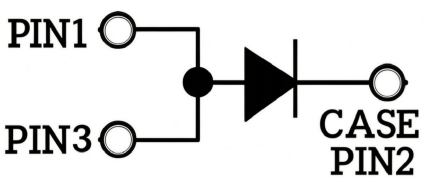


Mechanical Data

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

Key Performance Parameters

Parameter	Values	Unit
$I_{F(AV)}$	30	A
V_{RRM}	300	V
T_J	150	℃
V_F(max)	1.30	V
T_{RR}(max)	50	ns



Package Marking and Ordering Information

Part #	Marking	Package	Packing	Reel Size	Tape Width	Qty
MUR3030BS	MUR3030BS	TO-263-2L	Tape&reel	13 inch	24 mm	800pcs

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	300	V
Maximum RMS Voltage	V_{RMS}	210	V
Maximum DC blocking Voltage	V_{DC}	300	V
Maximum Average Forward Rectified Current *TC = 100 ℃*	$I_{F(AV)}$	30	A
Non-Repetitive Peak Forward Surge Current T_J=25℃,t_p=8.3 ms, Half Sine Pulse	I_{FSM}	300	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}	-	-	-	2.5	℃/W
Thermal resistance, junction - ambient	R_{thJA}	Mounted on 1 inch², 2 oz single copper FR-4 PCB.	-	-	40.0	℃/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	300	-	-	V
Forward voltage	V_F	I_F=30A,T_J=25°C	-	0.95	1.30	V
		I_F=30A,T_J=125°C	-	0.85	1.10	V
Reverse current	I_R	V_R=300V,T_J=25°C	-	0.02	10	μA
		V_R=300V,T_J=125°C	-	10.0	400	

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	-	235	-	pF
Reverse Recovery Time	t_{rr}	I_F=0.5A,I_R=1A,I_{RR}=0.25A	-	-	50	ns

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Typical Performance Characteristics

Fig 1:Forward Current Derating Curve

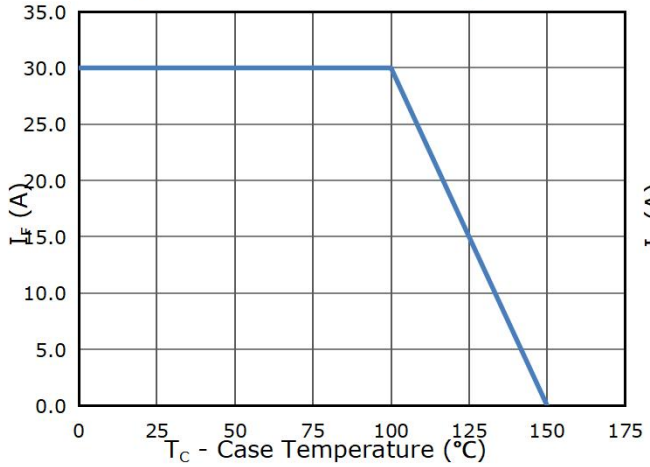


Fig 2: Forward Characteristics

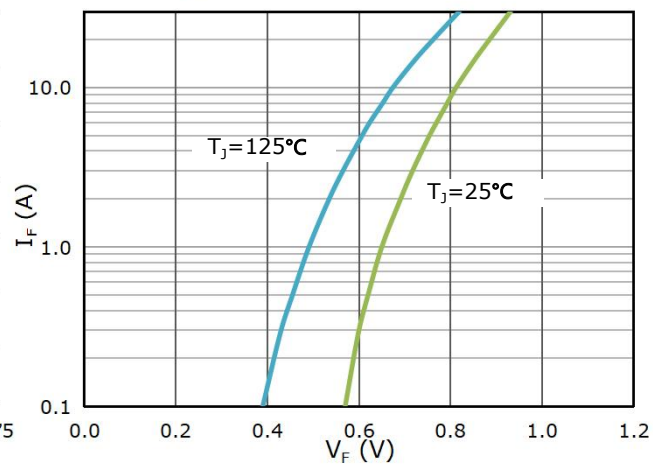


Fig 3: Maximun Non-repetitive Forward Surge Current

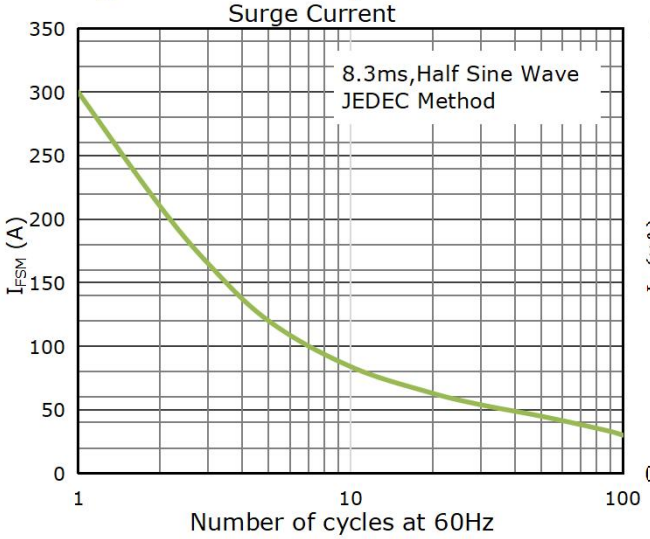
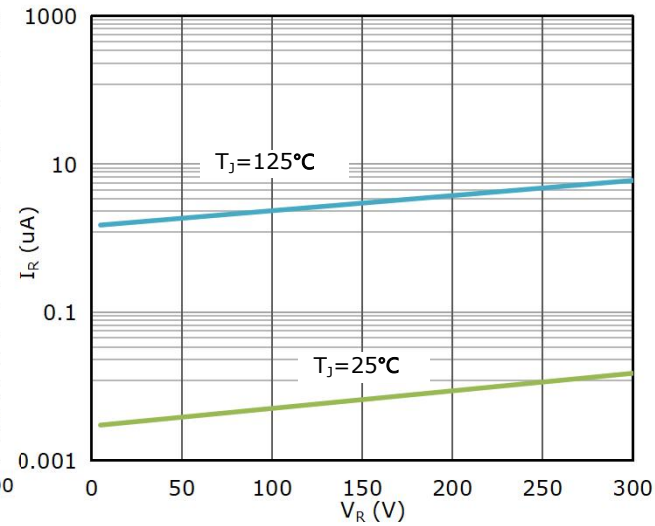
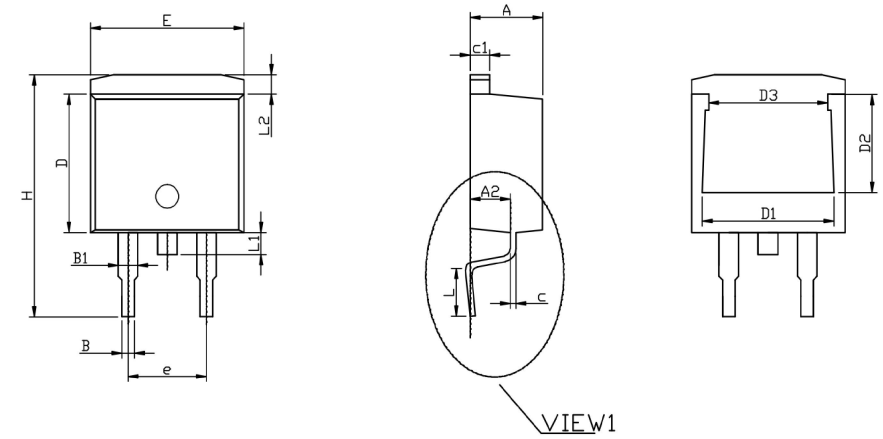


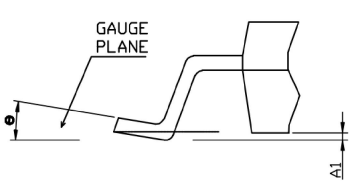
Fig 4: Reverse Characteristics



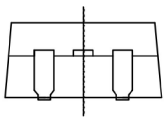
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Package Outline: TO-263-2L

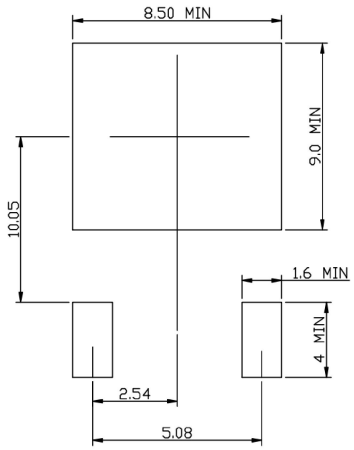




VIEW1



RECOMMENDED LAND PATTERN



UNIT: mm

	MIN	NOM	MAN
A	4.50	4.70	4.90
A1	0.05	0.15	0.30
A2	2.45	2.60	2.70
B	0.72	0.82	0.92
B1	1.12	1.27	1.42
c	0.28	0.38	0.48
c1	1.17	1.27	1.37
D	8.46	8.66	8.86
D1	7.90	8.10	8.40
D2	5.50	5.70	5.90
D3	7.10	7.30	7.50
E	9.85	10.15	10.45
e		5.08BCS	
H	14.75	15.15	15.55
L	2.30	2.55	2.80
L1	1.20	1.40	1.60
L2	1.01	1.23	1.50
θ	0°	7°	8°

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