

Bridge Rectifiers

Features

- High efficiency
- Ideal for automated placement
- High surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

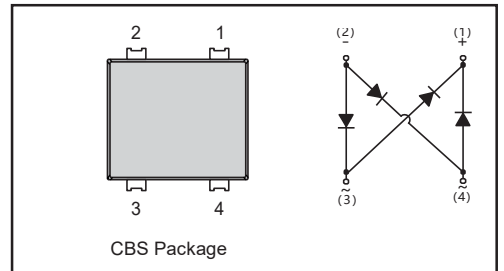
General purpose use in AC/DC bridge full wave rectification for power supply, lighting ballast, battery charger, home appliances, office equipment, and telecommunication applications.

Mechanical Data

- Package: CBS
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: As marked on body.

PINNING

PIN	DESCRIPTION
1	Output Anode (+)
2	Output Cathode (-)
3	Input Pin (~)
4	Input Pin (~)



■ Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	Unit	VRCBS8						
			005	01	02	04	06	08	10
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average Forward Current @Half-sine wave, Resistance load, $T_c=70^\circ C$	I_o	A	8						
Forward Surge Current (Non-repetitive) @60HZ sine wave, 1 cycle, $T_a=25^\circ C$	I_{FSM}	A	220						
Current squared time @1ms≤t8.3≤ms $T_a=25^\circ C$, Rating of per diode	I^2t	A ² s	200.8						
Thermal Resistance(Typical) @Between junction and ambient	$R_{\theta J-A}$	°C/W	50						
Storage Temperature	T_{stg}	°C	-55 ~ +150						
Junction Temperature	T_j	°C	-55 ~ +150						

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	Unit	Conditions	VRCBS8					
				005	01	02	04	06	08
Peak Forward Voltage	V_{FM}	V	$I_F = 4.0A$	1.0					
Peak Reverse Current	I_{RRM}	μA	$V_R = V_{DC} @T_a=25^\circ C$	5					
			$V_R = V_{DC} @T_a=125^\circ C$	300					
Maximum reverse recovery time	T_{rr}	ns	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	500					

■ Characteristics (Typical)

FIG.1: I_o - T_a Curve

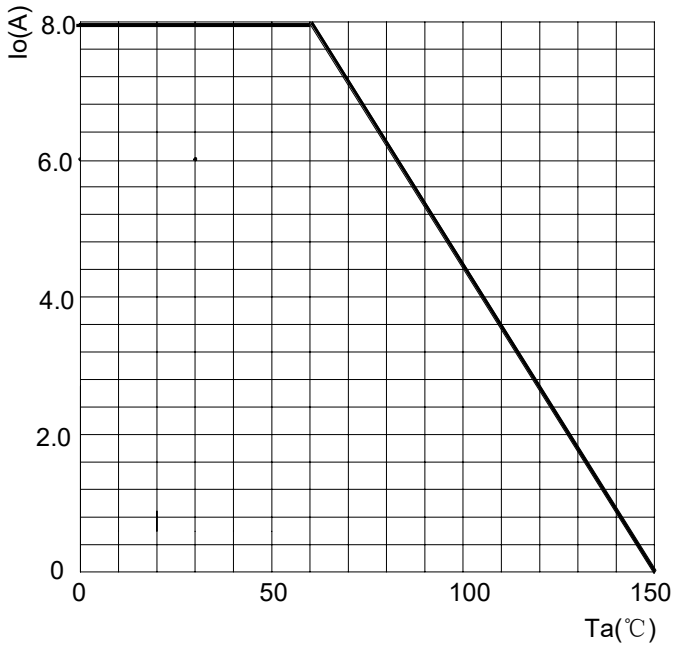


FIG.2: Forward Surge Current Capability

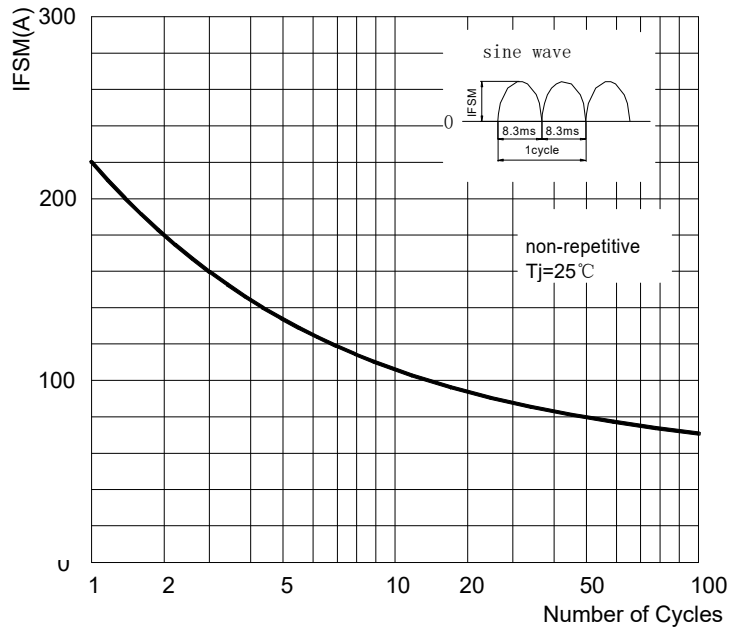


FIG.3: Forward Voltage

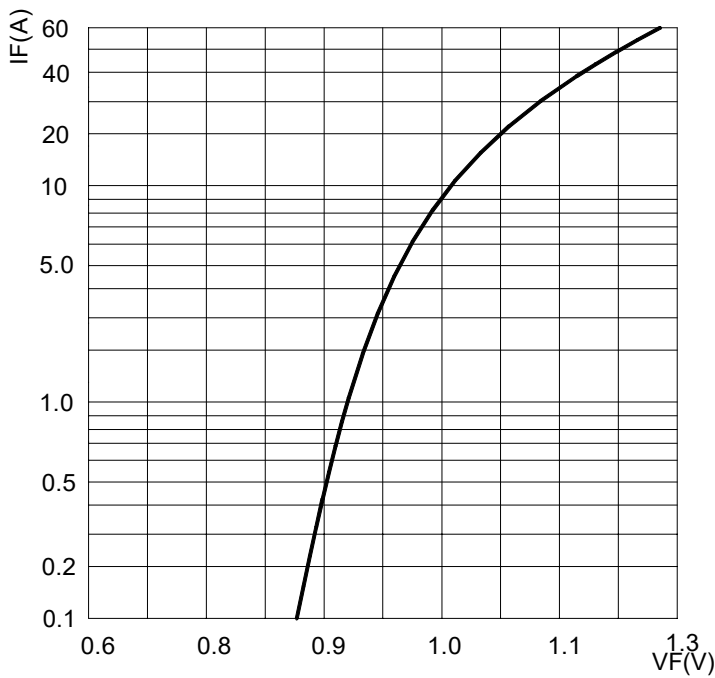
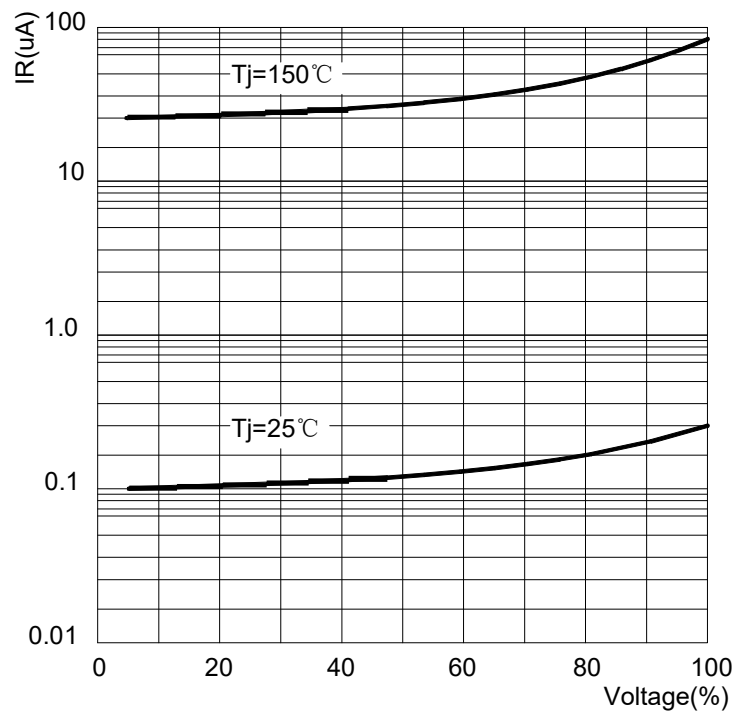


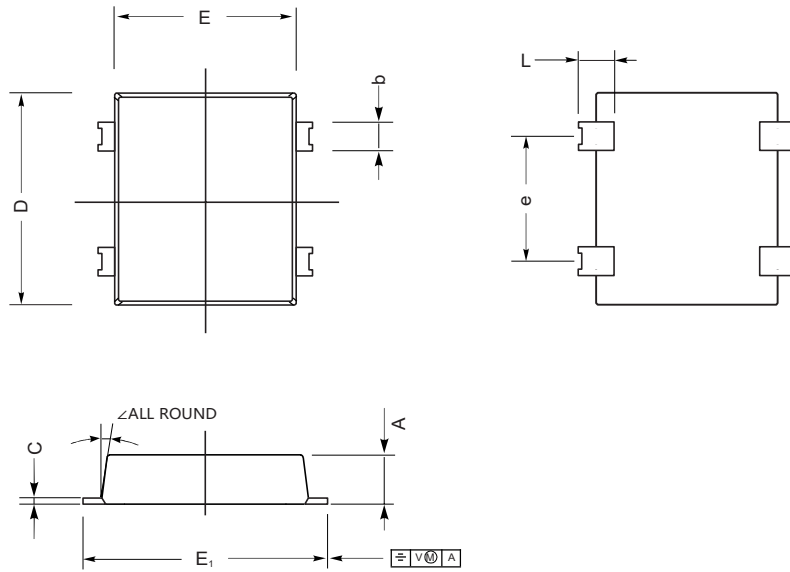
FIG.4: Typical Reverse Characteristics



■ Ordering Information (Example)

PREFERED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
VRCBS8005 THRU VRCBS810	CBS	3000	6000	48000	13" reel

■ Outline Dimensions



CBS mechanical data

UNIT		A	C	D	E	E ₁	L	e	b	∠
mm	max	1.75	0.55	9.8	8.8	10.2	1.25	5.3	1.55	10°
	min	1.35	0.25	9.4	8.4	9.8	0.85	4.9	1.25	
mil	max	68	21.6	385	346	401	49	209	61	
	min	53	9.8	370	330	385	33	193	49	

The recommended mounting pad size

