

SPECIFICATION

Silicon High Voltage Diode

MD8CP5

RoHS Compliant

SPEC. No. OS-ES3127A

オリジン電気株式会社

Origin Electric Co.,Ltd



Product Specification

Silicon High Voltage Diode

MD8CP5

1. STRUCTURE

Diffused Junction Silicon Device

2. APPLICATION

Rectifier for High Frequency

3. ABSOLUTE MAXIMUM RATINGS

Items	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RM}	In Oil	8	kV
		In Air	4	kV
Average Rectified Forward Current	I_O	In Oil $T_o=40^\circ\text{C}$, 50Hz, Square Wave ^{※1}	500	mA
		In Air $T_a=40^\circ\text{C}$, 50Hz, Square Wave ^{※1}	250	mA
Peak Forward Surge Current	I_{FSM}	$T_a=25^\circ\text{C}$, 50Hz, Sine Half Wave, Peak Value, Nonrepetitive	20	A
Operating Junction Temperature	T_j	—	-30~ +150	$^\circ\text{C}$
Storage Temperature	T_{stg}	—	-30~ +150	$^\circ\text{C}$

4. ELECTRICAL CHARACTERISTICS

Items	Symbol	Conditions	MAX	Unit	
Forward Voltage	V_F	$T_a=25^\circ\text{C}$, $I_F=500\text{mA}$	14	V	
Reverse Current	I_R	$T_a=25^\circ\text{C}$, $V_R=8\text{kV}$	10	μA	
Reverse Recovery Time	t_{rr}	$T_a=25^\circ\text{C}$, $I_F=100\text{mA}$, $I_R=200\text{mA}$, $I_{RR}=100\text{mA}$	75 (TYP 50)	ns	
Thermal Resistance	Junction to Oil	$R_{th(j-o)}$	On glass-epoxy Board ^{※1} , In Oil	30	$^\circ\text{C/W}$
	Junction to Ambient	$R_{th(j-a)}$	On glass-epoxy Board ^{※1} , In Air	70	$^\circ\text{C/W}$

※1 : Glass-epoxy Board (L=10mm, 20mm×20mm_Cu land)

照 査 CHECKED		承 認 APPROVED	T.Kanazawa	オリジン電気株式会社 Origin Electric Co., Ltd.	No. 1 / 3 OS-ES3127A / 3
設 計 DESIGNED	2015/3/17 S.Saito	検 認 APPROVED	N.Toyoguchi		



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5. Dimension

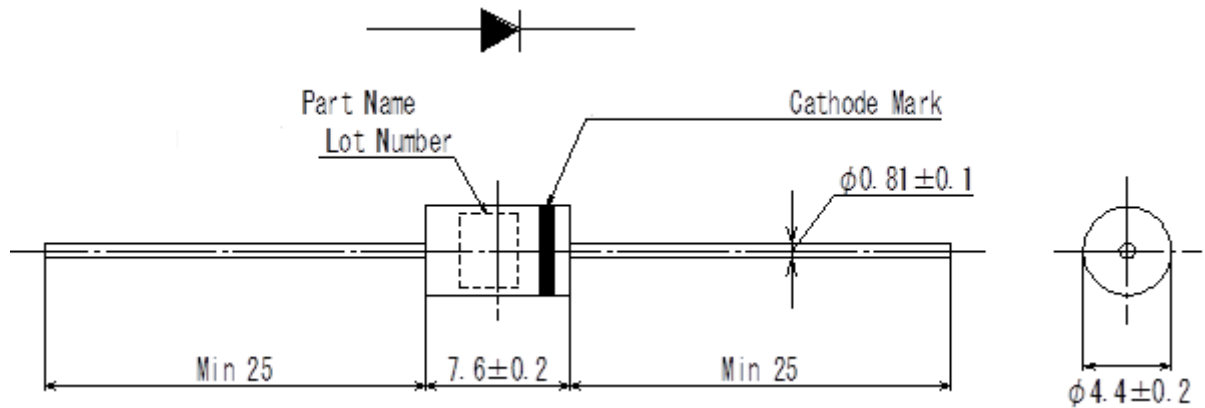


Figure 1 : External Dimensions

- (1) Unit : [mm]
Dimensions in millimeters
- (2) Flame retardant mold resin
(UL 94 V-0) pass
- (3) Terminal material : Cu
- (4) Terminal electrode plating
 - Composition : Sn
 - Thickness : More than 5 μm
- (5) Approximate weight : 0.6 g
- (6) Part Name Marking : 8CP5
- (7) Lot Number Marking : 「Year = first digit」 「Month = 1~9, O,N,D」
※e.g. 2014/11 = 4N

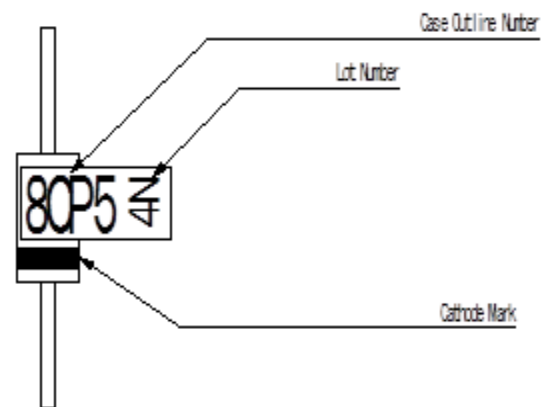


Figure 2 : Marking drawing

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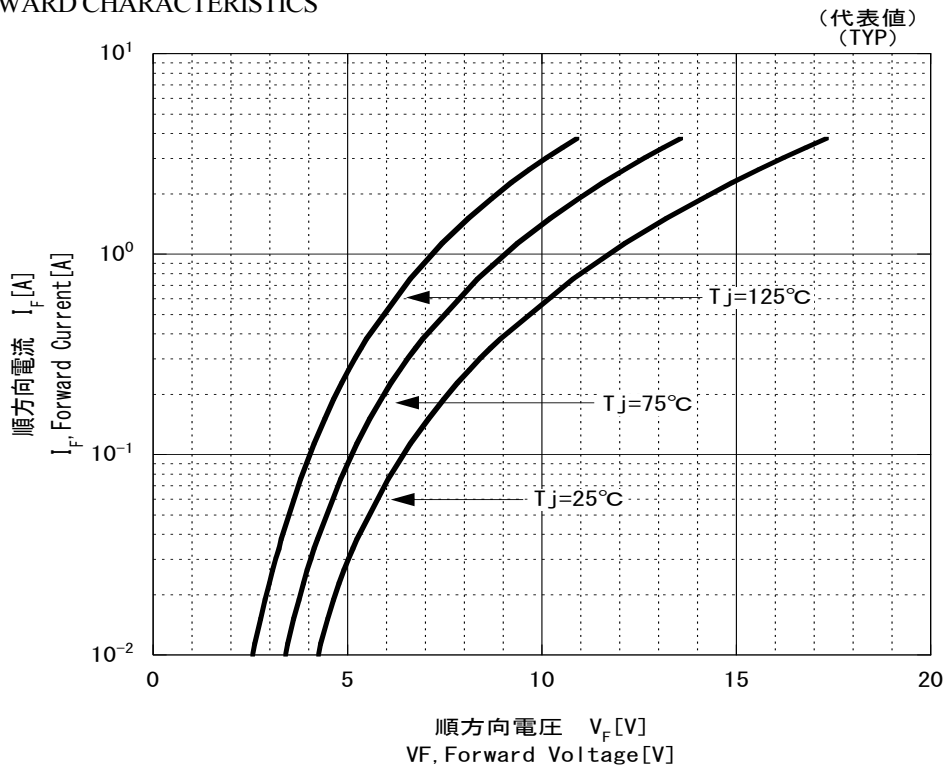


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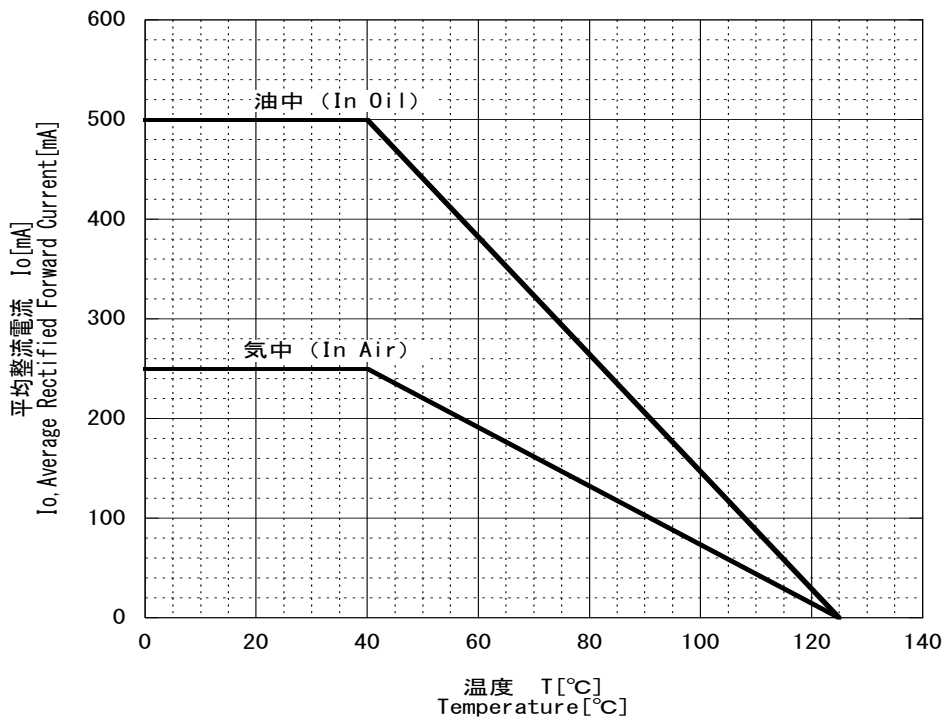
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6. FORWARD CHARACTERISTICS



7. AVERAGE RECTIFIED FORWARD CURRENT



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