



CM4148WS

Switching Diode

FEATURES

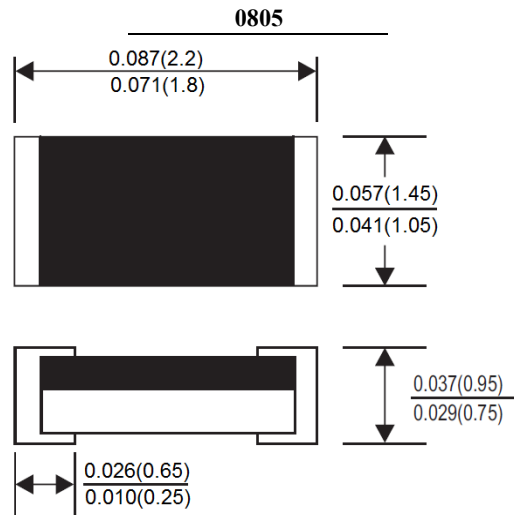
- Silicon epitaxial planar diode
- SMD chip pattern, available in various dimension included 1206 & 0603
- Leadfree and RoHS compliance components
- For small signal switching and operating ambient temperature less than 55 °C and voltage withstand less than 60V; not suitable for AC switching input as rectified circuit and high reverse voltage location. CM4148WSN is suitable for those application
- Suffix "H" indicates Halogen-free parts, ex. CM4148WSN

Mechanical Data

Case: 0805

Weight: approx. 6mg

Marking: Cathode band



Dimensions in inches and (millimeter)

Thermal Characteristics ¹⁾ @T_A=25 °C, unless otherwise specified

Parameter	Symbol	Value	Unit
Forward Power Dissipation	P _{tot}	200	mW
Power derating above 25°C		1.6	mW/°C
Junction Temperature	T _j	150	°C
Thermal Resistance Junction to Ambient air	R _{θJA}	375	°C/W
Operating & Storage Temperature range	T _{stg}	-55 to 150	°C

¹⁾ Valid provided that electrodes are kept at ambient temperature.

Electrical Rating ¹⁾ @T_A=25 °C, unless otherwise specified

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	75	V
Average rectified current sin half wave rectification with resistive load	I _{F(AV)}	150	mA
Repetitive Peak Forward Current at T _{amb} =25°C	I _{FRM}	300	mA
Non-Repetitive Surge Forward Current at t<1s and T _j =25°C at t≤8.3ms and T _j =25°C	I _{FSM}	500	mA
		1000	mA

¹⁾ Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics ¹⁾ @T_A=25 °C, unless otherwise specified

Parameter	Symbol	MAX.	Unit
Forward Voltage at I _F =10mA at I _F =100mA	V _F	1.0	V
		1.25	V
Leakage Current at V _R =20V	I _R	0.025	μA
Leakage Current at V _R =75V		5	μA
Capacitance at V _R =0V, f=1MHz	C _{tot}	4	pF
Reverse Recovery Time at I _F =I _R =10mA, R _L =100Ω	t _{rr}	4	nS

¹⁾ Valid provided that electrodes are kept at ambient temperature.



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Typical Characteristics @ $T_A = 25^\circ\text{C}$, unless otherwise specified

Figure 1. Forward Characteristic

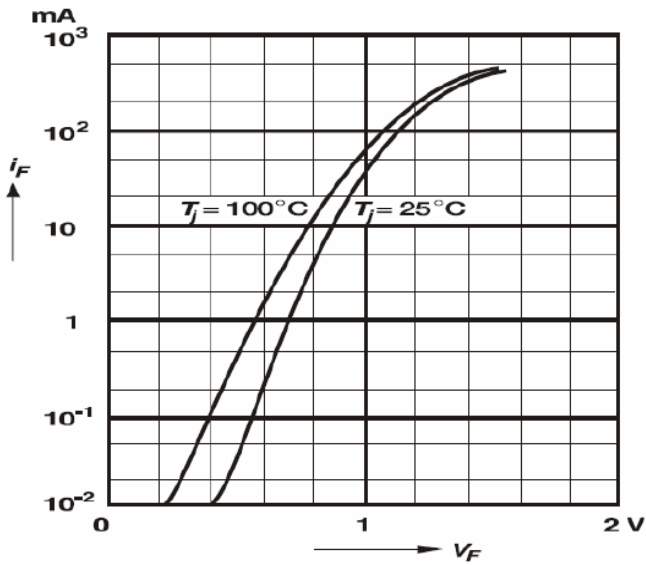


Figure 2. Power De-rating

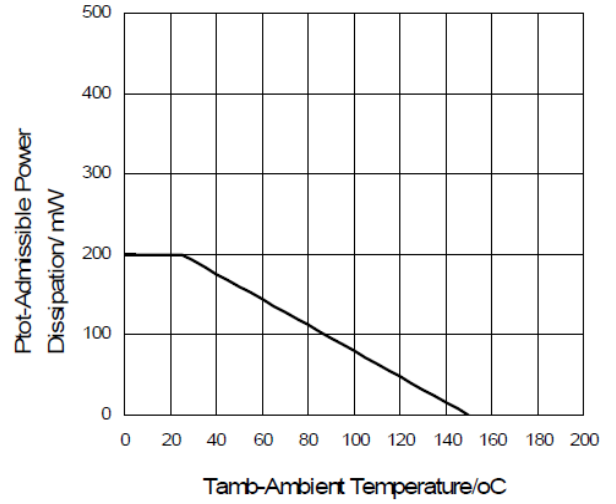


Figure 3. Forward Current De-rating

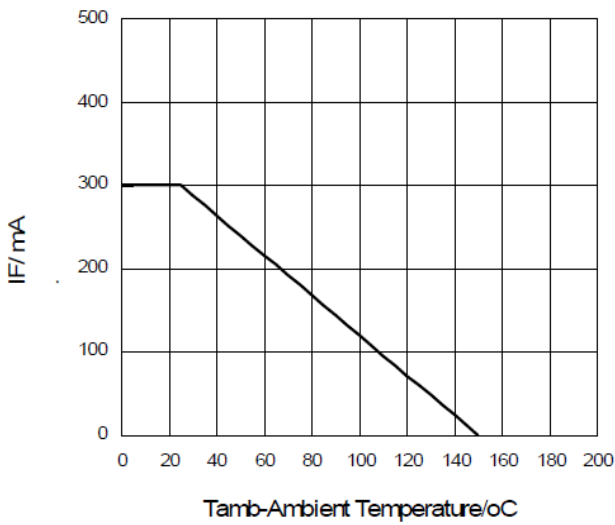


Figure 4. Reverse Voltage De-rating

