

Main Product Characteristics

$I_{F(AV)}$	5A
V_{RRM}	100V
T_J	150°C
$V_{(TYP)}$	0.55V

Features

- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- Ultra high-speed switching.
- Lead free in compliance with EU RoHS.

Mechanical data

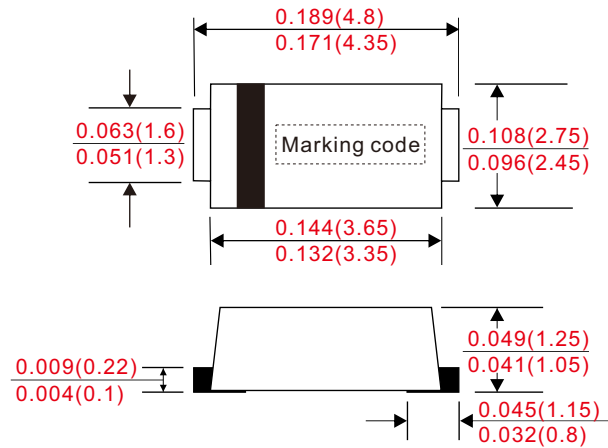
- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AC / MINI SMAS
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : Approximated 0.04 gram

Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Outline

MINI SMAS(DO-214AC)



Dimensions in inches and (millimeters)

Parameter	Conditions	Symbol	CTL5100MASG	UNIT
Working peak reverse voltage		V_{RWM}	100	V
Forward rectified current		I_O	5	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	80	A
Peak repetitive reverse surge current	2us - 1kHz	I_{RRM}	1	A
Typical Thermal resistance	Junction to case	R_{BJC}	6	°C/W
	Junction to ambient	R_{BJA}	60	°C/W
Storage temperature		T_{STG}	-55 ~ +150	°C
Operating Junction temperature		T_J	-55 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	$I_F = 3A, T_J = 25^\circ C$	V_F		530		mV
	$I_F = 5A, T_J = 25^\circ C$			610	670	
	$I_F = 5A, T_J = 125^\circ C$			550	600	
Reverse current	$V_R = 100V, T_J = 25^\circ C$	I_R		0.01	0.1	mA
	$V_R = 100V, T_J = 125^\circ C$			10	40	
Reverse Breakdown Voltage	$I_R = 0.1mA, T_J = 25^\circ C$	V_{BR}	100			V

Rating and characteristic curves

Fig. 1 - Forward Characteristics

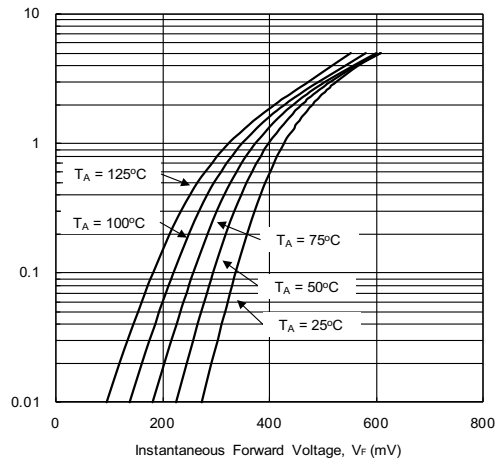


Fig. 2 - Reverse Characteristics

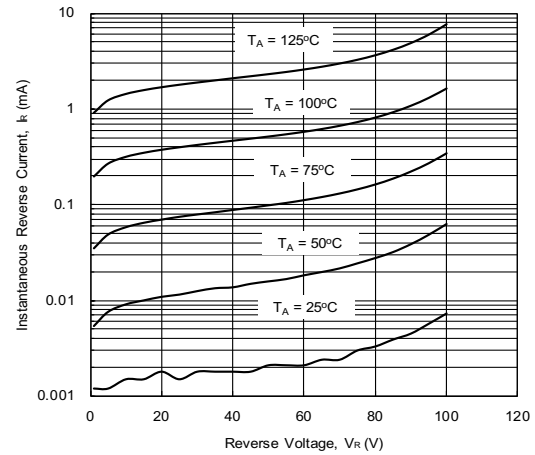


Fig. 3 - Forward Power Dissipation

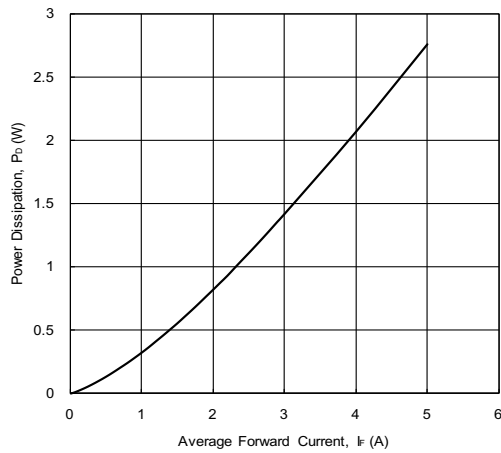


Fig. 4 - Forward Current Derating Curve

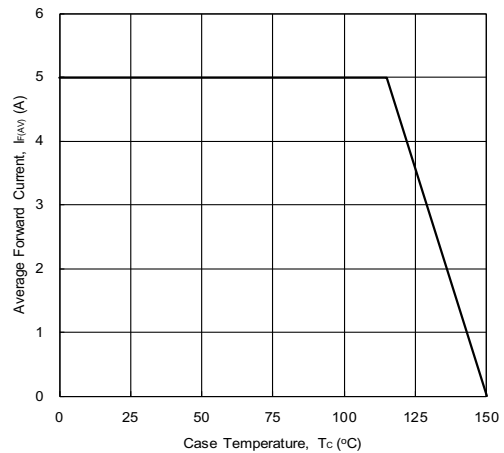
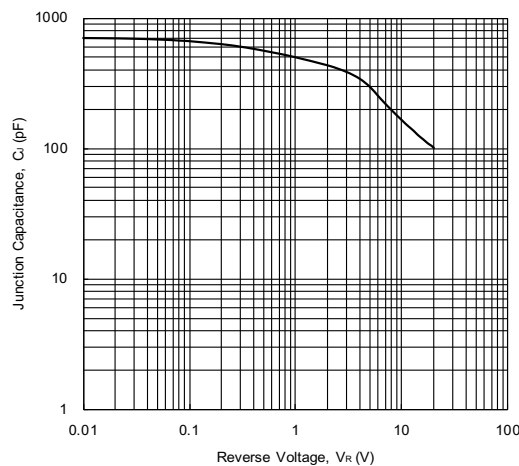


Fig. 5 - Junction Capacitance



■ Marking Information



CTL5100MASG : Product type marking code

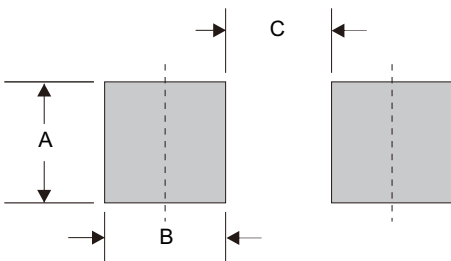
: CITC Logo

■ Ordering / Packing Information

	Part number	Case	Q'TY/Reel (PCS)	Q'TY/Box (PCS)	Q'TY/Carton (PCS)
Halogen free	CTL5100MASG	MINI SMAS	5,000	10,000	50,000

Notes : 1. For packaging details please reference our website at <http://www.citcorp.com.tw/tchinese/products/index.php>

■ MINI SMAS foot print



A	B	C
0.063 (1.60)	0.059 (1.50)	0.110 (2.80)

Dimensions in inches and (millimeters)

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