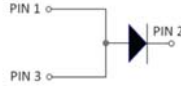


High-Voltage Trench Barrier Schottky Rectifier

Product Summary:

V_{RRM}	100V
$V_F @ I_F=10A$	0.58V
$I_{F(AV)}$	10A



Trench Schottky Technology

Pb-Free Lead Plating & Halogen Free



ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ }^\circ\text{C}$ Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS	SYMBOL	LIMITS	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode	I_{FSM}	150	
Peak Repetitive Reverse Current @ $t_p = 2\text{ }\mu\text{s}$, 1 kHz, $T_j = 38\text{ }^\circ\text{C} \pm 2\text{ }^\circ\text{C}$ per Diode	I_{RRM}	1	
Non-repetitive Avalanche Energy @ $T_j = 25\text{ }^\circ\text{C}$, L = 60 mH per Diode	E_{AS}	150	mJ
Voltage rate of change (rated V_R)	dV/dt	10000	V/ μs
Operating Junction & Storage Temperature Range	T_j, T_{stg}	-40 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNIT
Junction-to-Case	$R_{\theta JC}$		8	$^\circ\text{C} / \text{W}$
Junction-to-Ambient	$R_{\theta JA}$		60	

¹Pulse width limited by maximum junction temperature.

²Duty cycle $\leq 1\%$



ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$, Unless Otherwise Noted)

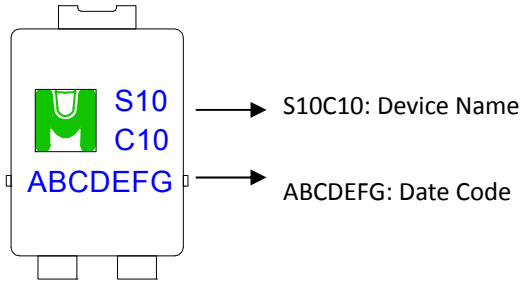
PARAMETER	SYMBOL	TEST CONDITIONS		LIMITS			UNIT
				MIN	TYP	MAX	
Breakdown Voltage	V_{BR}	$I_R=1.0\text{mA}$		100			V
Instantaneous Forward Voltage per Diode	V_F^1	$I_F=5\text{A}$	$T_A = 25\text{ }^\circ\text{C}$		0.55		V
		$I_F=10\text{A}$			0.65	0.79	
		$I_F=5\text{A}$	$T_A = 125\text{ }^\circ\text{C}$		0.50		
		$I_F=10\text{A}$			0.58	0.68	
Reverse Current per Diode	I_R^2	$V_R = 70\text{V}$	$T_A = 25\text{ }^\circ\text{C}$		5		μA
			$T_A = 125\text{ }^\circ\text{C}$		6		mA
		$V_R = 100\text{V}$	$T_A = 25\text{ }^\circ\text{C}$		15	500	μA
			$T_A = 125\text{ }^\circ\text{C}$		15	35	mA

¹Pulse test : 300 μs Pulse Width, 1% Duty Cycle.

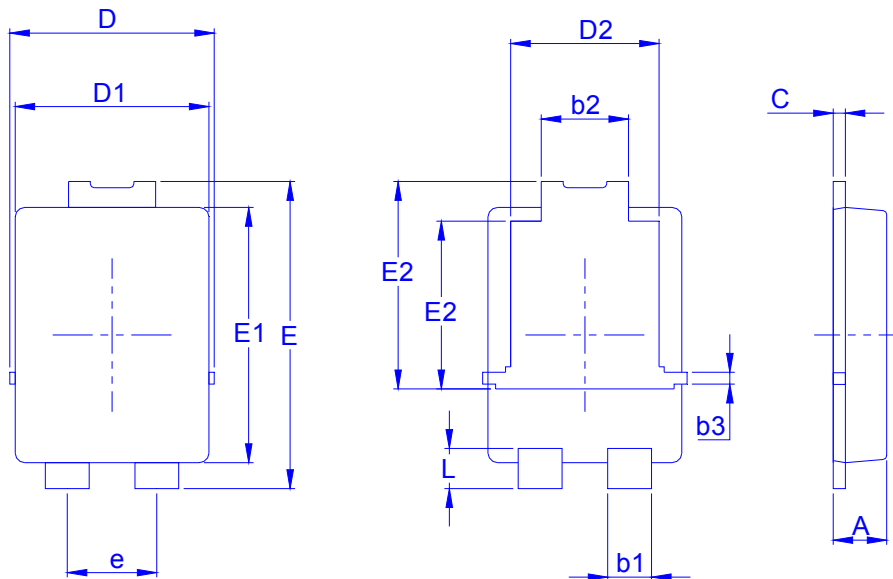
²Pulse Width $\leq 40\text{ms}$.

Ordering & Marking Information:

Device Name: EMS10C10UC for TO-277



Outline Drawing



Dimension in mm

Dimension	A	b1	b2	b3	C	D	D1	D2	E	E1	E2	E3	e	L
Min.	1.05	0.80	1.70	0.15	0.20	4.0	3.90	2.95	6.4	5.30	3.45	4.2	1.84	0.75
Max.	1.15	0.99	1.88	0.35	0.33	4.3	4.05	3.15	6.6	5.45	3.65	4.6		0.95

