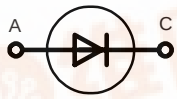
Power Schottky Rectifier

I_{FAV} = 1 A
V_{RRM} = 40 V
V_F = 0.34 V

V_{RSM} V	V_{RRM} V	Type	Marking on product
40	40	DSS 1-40BA	X1EB



SMA (DO-214 AC)

Symbol	Conditions	Maximum Ratings	
I_{FAV}	T_L = 125°C; rectangular, d = 0.5	1	A
I_{FAVM}	rectangular, d = 0.5	2	A
I_{FSM}	T_{VJ} = 45°C; t_p = 10 ms (50 Hz), sine	45	A
E_{AS}	I_{AS} = tbd A; L = 100 µH; T_{VJ} = 25°C; non repetitive	tbd	mJ
I_{AR}	V_A =1.5 • V_{RRM} typ.; f=10 kHz; repetitive	tbd	A
$(dv/dt)_{cr}$		10000	V/µs
T_{VJ}*		-55...+150	°C
T_{VJM}		150	°C
T_{stg}		-55...+150	°C
Weight	typical	0.07	g
Package unit	tape & reel	7500	pcs

Symbol	Conditions	Characteristic Values typ.	max.	
I_R	T_{VJ} = 25°C; V_R = V_{RRM}		0.1	mA
	T_{VJ} = 125°C; V_R = V_{RRM}		5	mA
V_F ①	I_F = 1 A; T_{VJ} = 25°C		0.42	V
	I_F = 2 A; T_{VJ} = 25°C		0.50	V
	I_F = 1 A; T_{VJ} = 125°C		0.34	V
	I_F = 2 A; T_{VJ} = 125°C		0.42	V
R_{thJL}	thermal resistance junction to lead mounted on 1 inch square PCB		30	K/W
R_{thJA}	thermal resistance junction - ambient		70	K/W
C_T	junction capacitance	115		pF

* $\frac{dP_{tot}}{dT_J} < \frac{1}{R_{th(J-A)}}$ thermal runaway condition for a diode on its own heatsink

Pulse test: ① Pulse Width = 400 µs, Duty Cycle < 2.0 %
Data according to IEC 60747 and per diode unless otherwise specified

Features

- International standard package
- Very low V_F
- Extremely low switching losses
- Low I_{RM}
- Epoxy meets UL 94V-0

Applications

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters
- Decoupling diode

Advantages

- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

Dimensions in mm