

SD103ATW-HF

RoHS Device
Halogen Free



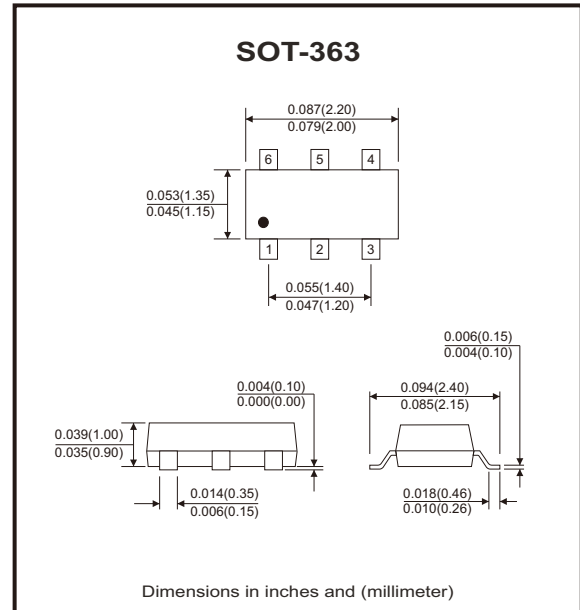
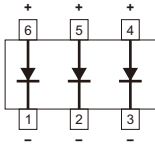
Features

- Low forward voltage drop.
- Guard ring construction for transient protection.
- Fast switching.
- Low leakage current.

Mechanical data

- Case: SOT-363, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



Maximum Rating (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	40	V
Working peak reverse voltage	V_{RWM}	40	V
DC blocking voltage	V_R	40	V
RMS reverse voltage	V_{RMS}	28	V
Forward continuous current	I_{FM}	350	mA
Average rectified current	I_o	175	mA
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$	I_{FSM}	2	A
Power dissipation	P_D	200	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	500	$^{\circ}\text{C/W}$
Operation junction temperature range	T_J	-40 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_{BR}	$I_R = 100\mu A$	40			V
Forward voltage	V_F	$I_F = 20mA$			0.37	V
		$I_F = 100mA$			0.5	
Reverse current	I_R	$V_R = 10V$			2	μA
		$V_R = 30V$			5	
Capacitance between terminals	C_J	$V_R = 0V, f = 1MHz$		50		pF
Reverse recovery time	t_{rr}	$I_F = I_R = 200mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$		10		ns

Typical Rating and Characteristic Curves (SD103ATW-HF)

Fig.1 - Forward Characteristic

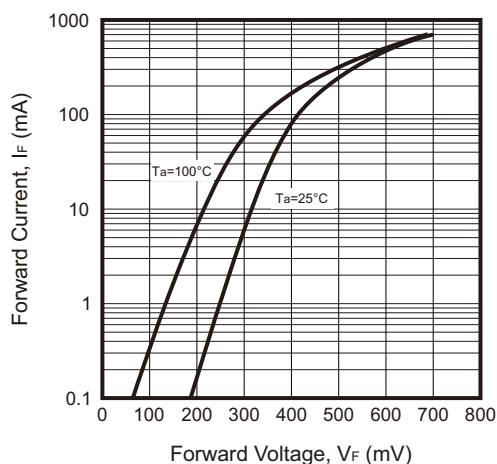


Fig.2 - Reverse Characteristic

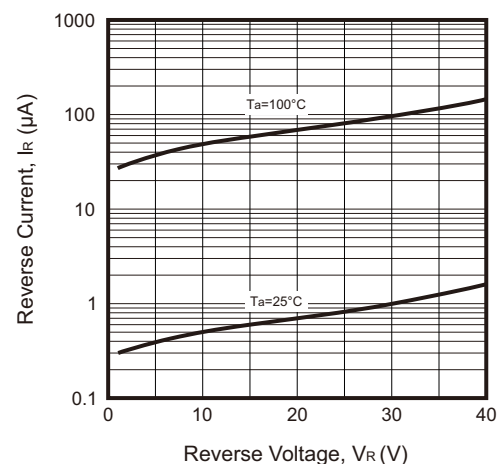


Fig.3 - Capacitance Characteristics

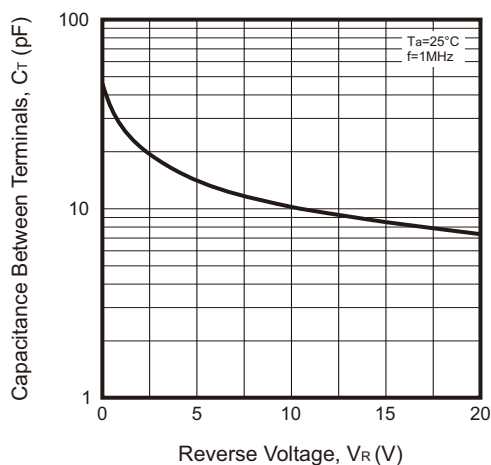
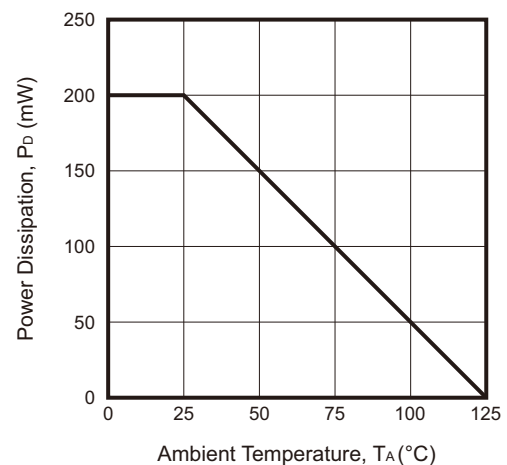
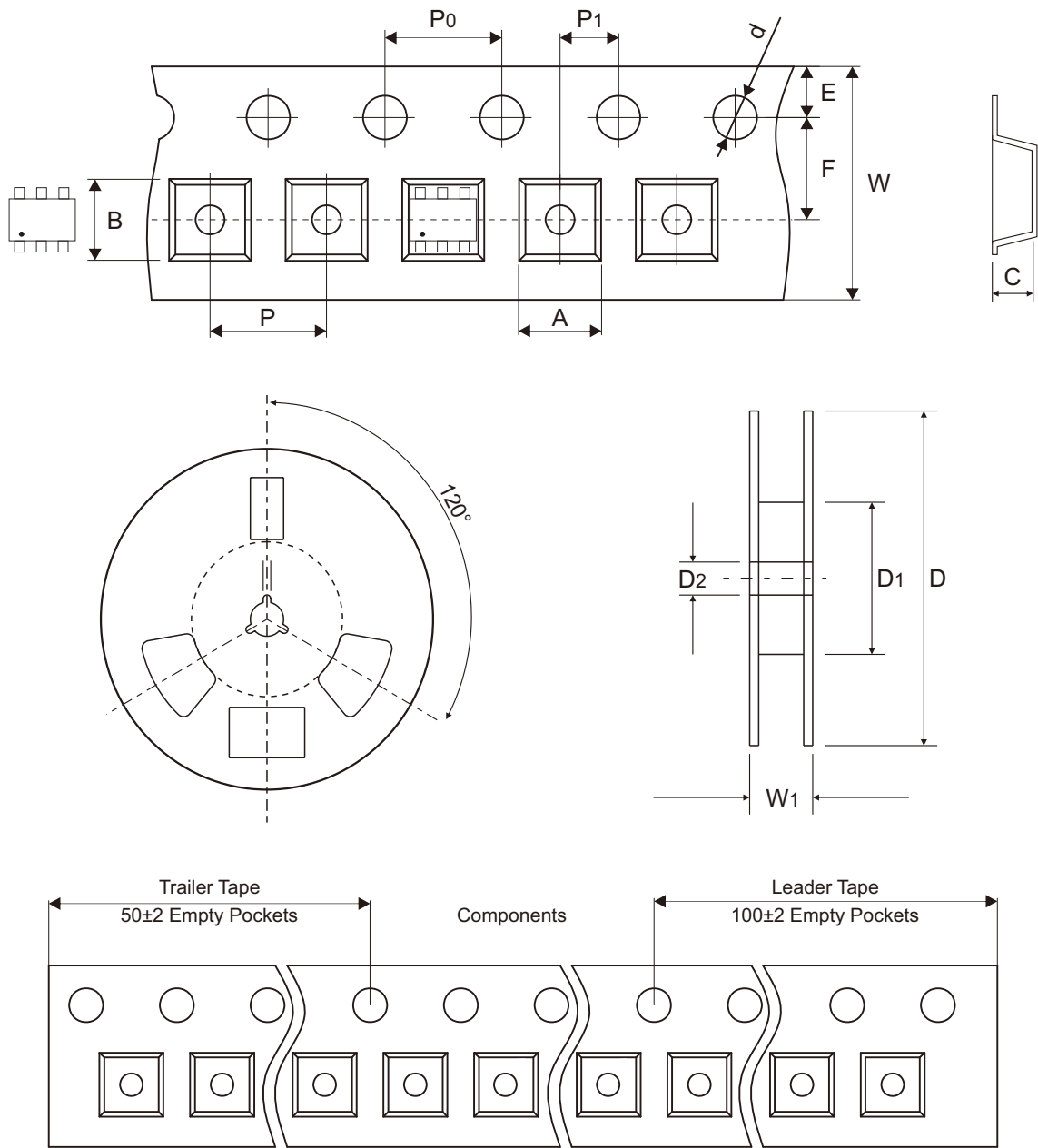


Fig.4 - Power Derating Curve



Reel Taping Specification

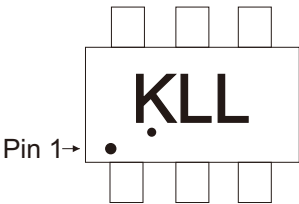


SOT-363	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.25 ± 0.13	2.55 ± 0.10	1.20 ± 0.10	1.50 + 0.10 - 0.00	178.00 ± 0.10	54.40 ± 0.40	13.00 ± 0.20
	(inch)	0.089 ± 0.005	0.100 ± 0.004	0.047 ± 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.004	2.142 ± 0.016	0.512 ± 0.008

SOT-363	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 - 0.004	0.484 ± 0.039

Marking Code

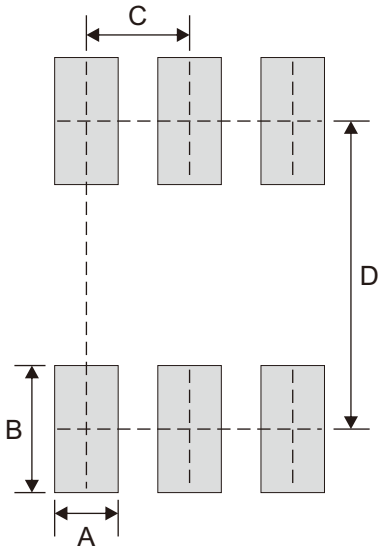
Part Number	Marking Code
SD103ATW-HF	KLL



Solid dot = Control code

Suggested P.C.B. PAD Layout

SIZE	SOT-363	
	(mm)	(inch)
A	0.40	0.016
B	0.80	0.031
C	0.65	0.026
D	1.94	0.076



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-363	3,000	7