

ACDBS140-HF

Forward current: 1.0A

Reverse voltage: 40V

RoHS Device

Halogen Free

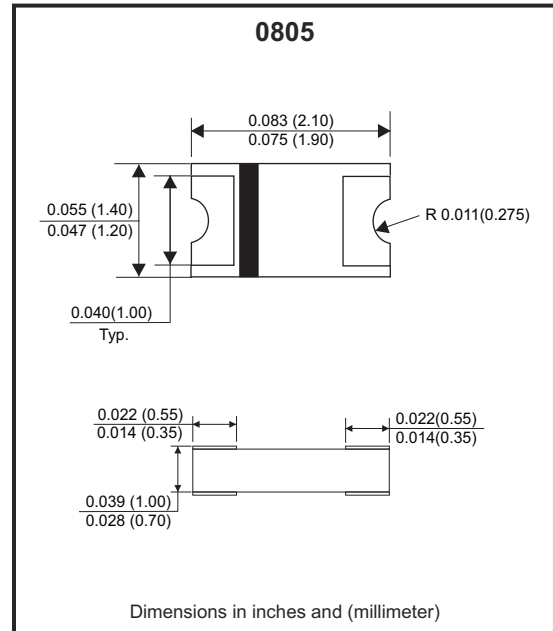


Features

- Low power loss, High efficiency.
- High current capability, low VF
- Plastic package has underwriters laboratory flammability classification 94V-0.
- Comply with AEC-Q101

Mechanical Data

- Case: Packed with FRP substrate and epoxy underfilled.
- Terminals: Pure Tin plated (Lead-Free), solderable per MIL-STD-750, method 2026.
- Polarity: Laser cathode band marking.
- Weight: 0.005 grams (approx).



Circuit diagram



Maximum Ratings (At Ta=25°C, unless otherwise noted)

Parameter	Symbol	ACDBS140-HF	Unit
Repetitive peak reverse voltage	V_{RRM}	40	V
Average forward current	$I_{F(AV)}$	1.0	A
Peak forward surge current @8.3ms single half sine-wave	I_{FSM}	10	A
Junction temperature	T_J	125	°C
Operating temperature range	T_{opr}	-40 to +85	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Electrical Characteristics (At Ta=25°C, unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward voltage (Note 1)	$I_F=0.1A$	V_F	-	0.33	-	V
	$I_F=0.5A$		-	0.40	-	
	$I_F=1.0A$		-	0.47	0.50	
Repetitive peak reverse current (Note 1)	$V_R=Max.V_{RRM}, T_a=25^\circ C$	I_{RRM}	-	0.028	0.2	mA
Junction capacitance	$V_R=4V, f=1.0MHz$	C_J	-	115	-	pF
Thermal resistance	Junction to ambient	$R_{\theta JA}$	-	120	-	°C/W
	Junction to lead	$R_{\theta JL}$	-	28	-	°C/W

Note: (1) Pulse test width $p_w=300\mu$ sec, 1% duty cycle.
 (2) Mounted on P.C. board with 0.2*0.2" (5.0*5.0mm) copper pad areas.

Company reserves the right to improve product design, functions and reliability without notice.

REV: A

RATING AND CHARACTERISTIC CURVES (ACDBS0140-HF)

Fig.1 - Forward Current Derating Curve

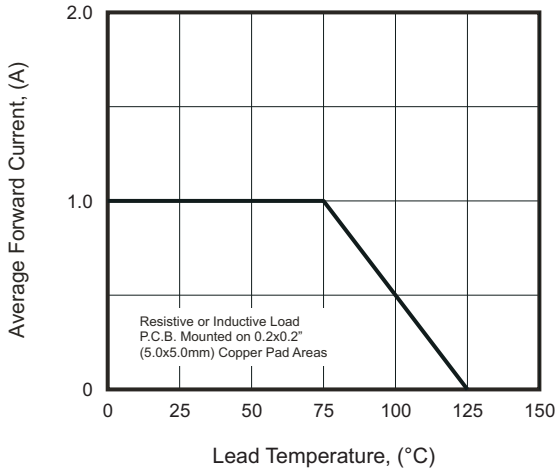


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

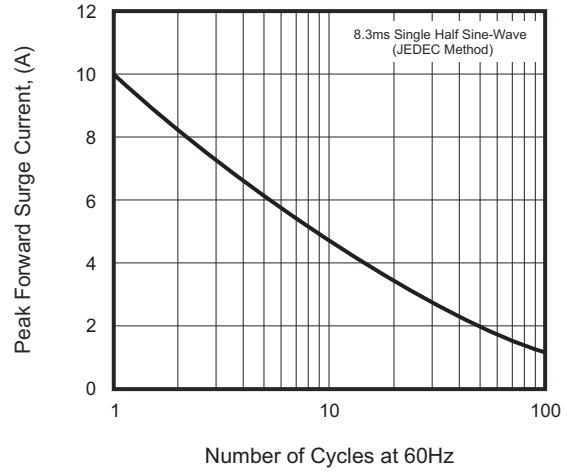


Fig.3 - Typical Instantaneous Forward Characteristics

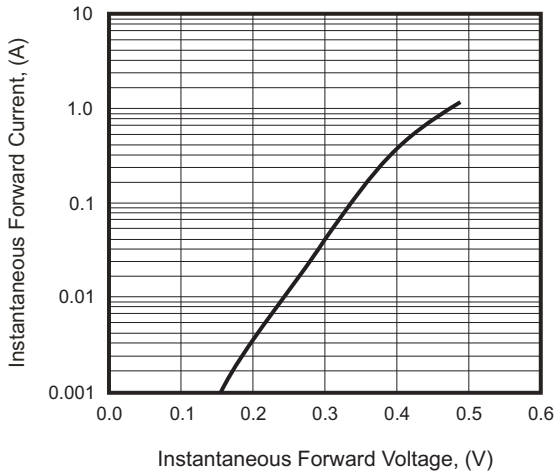


Fig.4 - Typical Reverse Characteristics

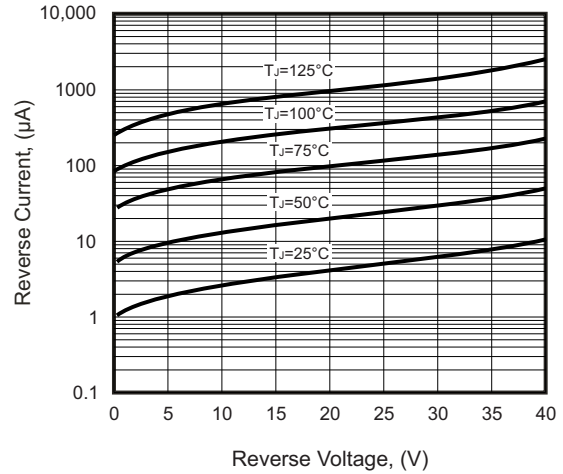
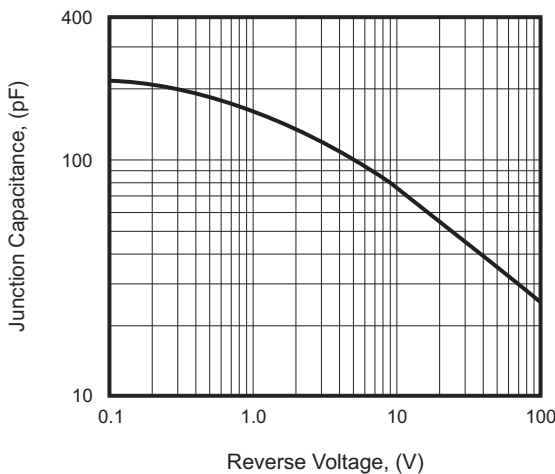
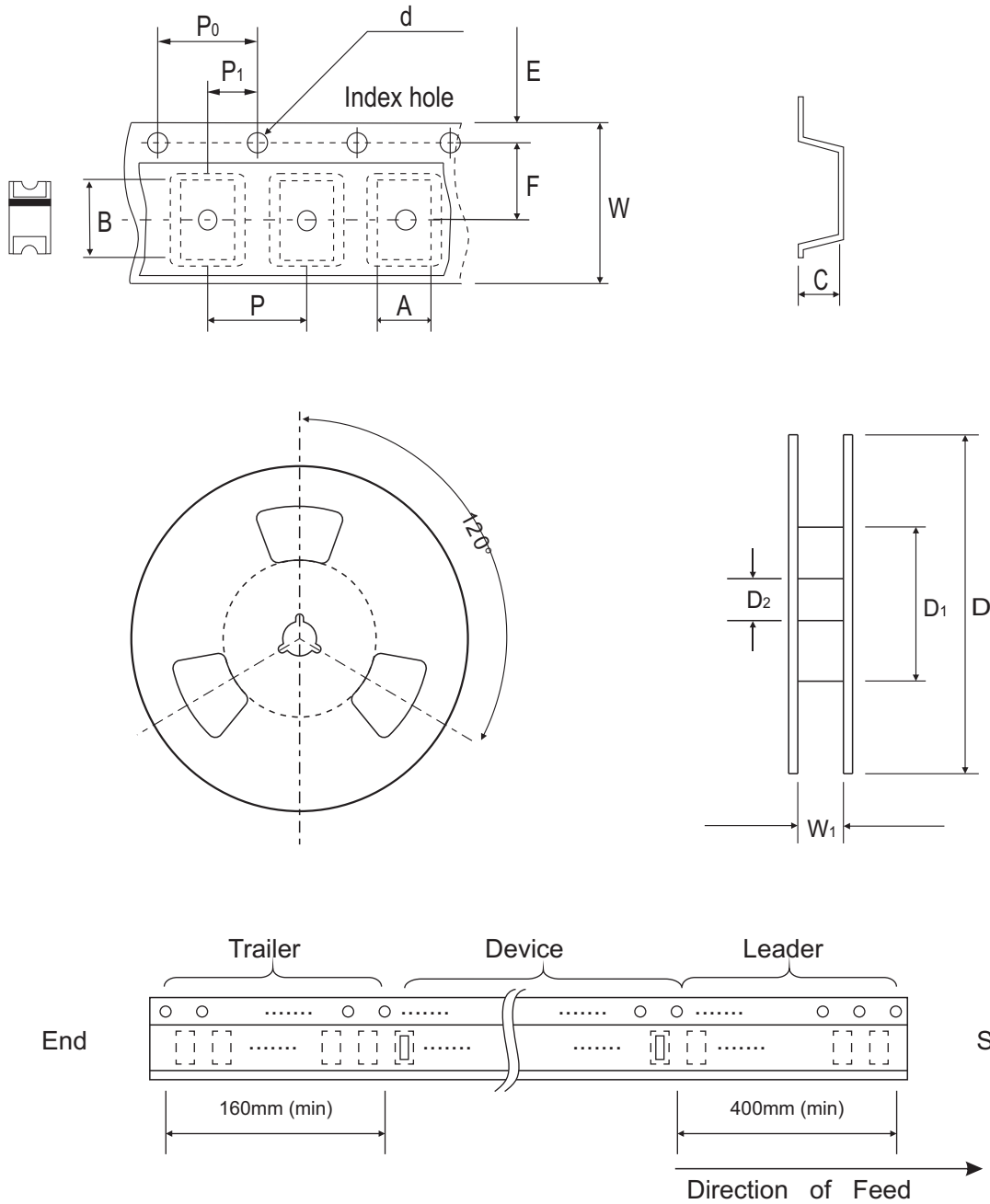


Fig.5 - Typical Junction Capacitance



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Reel Taping Specification



0805	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.45 ± 0.10	2.25 ± 0.10	1.10 ± 0.10	1.50 ± 0.10	178 ± 2.00	60 ± 0.50	13.50 ± 0.50
	(inch)	0.057 ± 0.004	0.089 ± 0.004	0.043 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.362 ± 0.020	0.531 ± 0.020

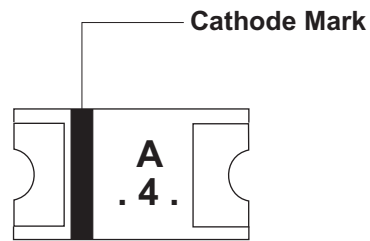
0805	SYMBOL	E	F	P	P ₀	P ₁	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 ± 0.30	9.0 ± 0.50
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 ± 0.012	0.354 ± 0.02

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REV: A

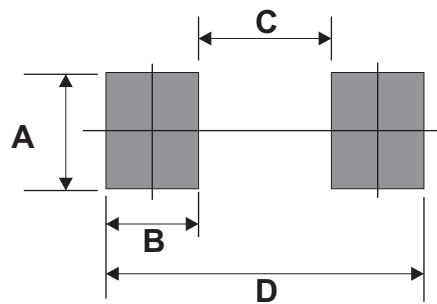
Marking Code

Part Number	Marking Code
ACDBS140-HF	A .4.



Suggested PAD Layout

SIZE	0805	
	(mm)	(inch)
A	0.90 MIN.	0.035 MIN.
B	0.80 MIN.	0.031 MIN.
C	1.30 MAX.	0.051 MAX.
D	2.90 REF.	0.114 REF.



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
0805	3,000	7