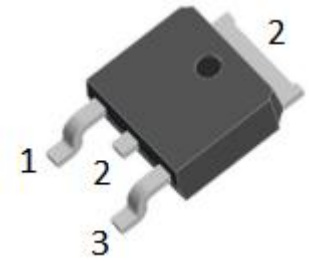
Technical Data
Data Sheet N0249, Rev. A

HD860 ULTRAFAST RECTIFIER

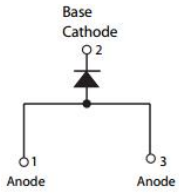


DPAK

Features

- **Ultra-Fast switching**
- **High current capability**
- **Low reverse leakage current**
- **High surge current capability**
- **Plastic Material has UL Flammability Classification 94V-O**
- **This is a Pb − free device**
- **All SMC parts are traceable to the wafer lot**
- **Additional testing can be offered upon request**

Circuit Diagram



Mechanical Data

- **Case: Molded Plastic**
- **Terminals: Plated Leads, Solderable per MIL-STD-202, Method 208**
- **Weight: 0.39 grams (approx.)**
- **Mounting Position: Any**

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	HD860	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	420	V
Average Rectified Output Current @T_A =100°C	Io	8.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	110	A
Forward Voltage (per element) @I_F = 8.0A, T_J=25°C	V_{FM}	1.7	V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	5.0 50	μA
Maximum Reverse Recovery Time (Note 1)	Trr	50	ns
Max. Voltage Rate of Change	dv/dt	10,000	V/μs
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	25	K/W
Storage Temperature Range	T_{STG}, T_J	-55 to +150	°C

Note: 1. Measured with I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
2. Mounted on P.C. Board with 8.0mm² lead area

Ratings and Characteristics Curves

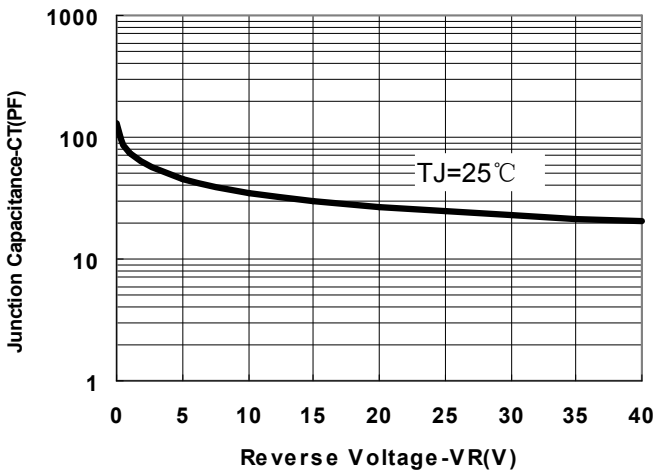


Fig.1-Typical Junction Capacitance

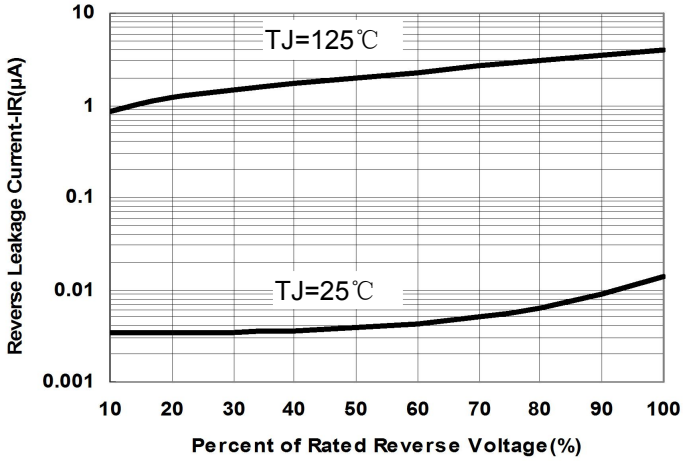


Fig.2-Typical Reverse Characteristics

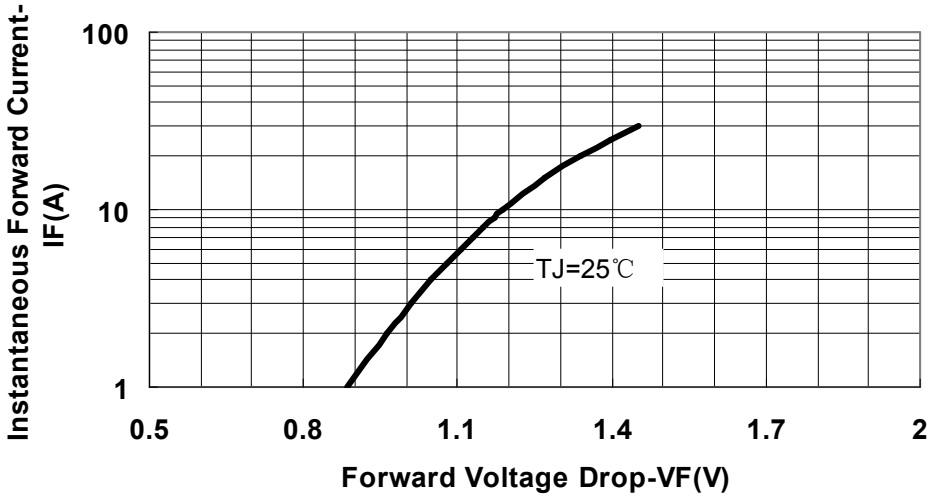


Fig.3-Typical Forward Voltage Drop Characteristics

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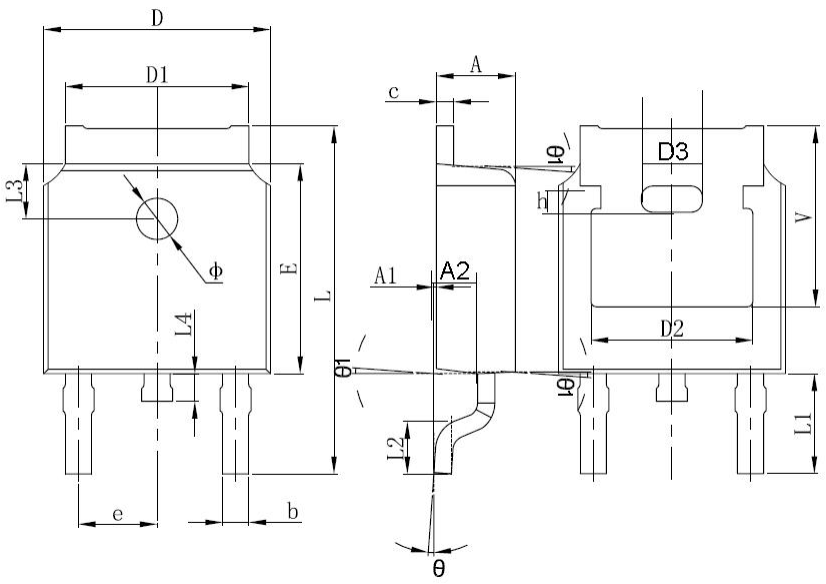
Mechanical Dimensions DPAK



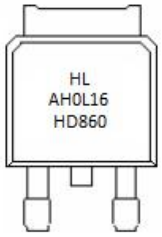
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.38	0.087	0.094
A1	0.00	0.10	0.000	0.004
b	0.71	0.81	0.028	0.032
c	0.46	0.56	0.018	0.022
D	6.50	6.70	0.256	0.264
D1	5.13	5.46	0.202	0.215
D2	4.83 REF.		0.190 REF.	
E	6.00	6.20	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.80	10.40	0.386	0.409
L1	2.90 REF.		0.144 REF.	
L2	1.40	1.70	0.055	0.067
L3	1.60 REF.		0.063 REF.	
L4	0.60	1.00	0.024	0.039
Φ	1.10	1.30	0.043	0.051
Θ	0°	8°	0°	8°
A2	0.91	1.11	0.036	0.044
V	5.35 REF.		0.211 REF.	
D3	1.778 REF.		0.070 REF.	
h	0.762REF.		0.030 REF.	
Θ1	7°		7°	

Ordering Information

Device	Package	Shipping
HD860	DPAK (Pb-Free)	2500pcs / reel

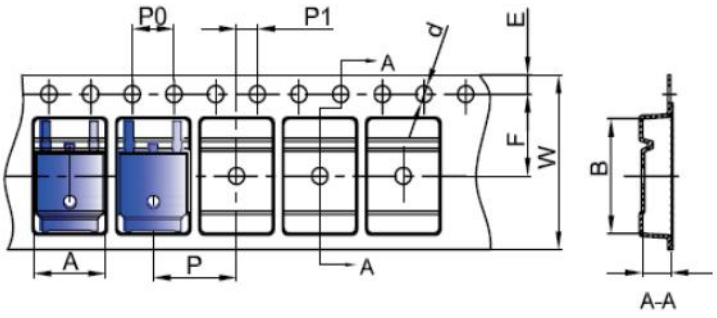
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



1st row HL
2nd row AH0 LXX
3rd row HD860
Where XX is Determined by customer

Carrier Tape & Reel Specification DPAK



SYMBOL	Millimeters	
	Min.	Max.
A	6.80	7.00
B	10.40	10.60
C	2.60	2.80
d	Φ1.45	Φ1.65
E	1.65	1.85
F	7.40	7.60
P0	3.90	4.10
P	7.90	8.10
P1	1.90	2.10
W	15.90	16.30

HD860

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