

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	TEST CONDITIONS	VALUES	UNITS
Maximum average forward current See fig. 5	$I_{F(AV)}$	50 % duty cycle at $T_C = 78\text{ }^{\circ}\text{C}$, rectangular waveform	80	A
Maximum peak one cycle non-repetitive surge current per leg See fig. 7	I_{FSM}	5 μs sine or 3 μs rect. pulse	5200	
		10 ms sine or 6 ms rect. pulse	850	
Non-repetitive avalanche energy per leg	E_{AS}	$T_J = 25\text{ }^{\circ}\text{C}$, $I_{AS} = 2\text{ A}$, $L = 4.5\text{ mH}$	9	mJ
Repetitive avalanche current per leg	I_{AR}	Current decaying linearly to zero in 1 μs Frequency limited by T_J maximum $V_A = 3 \times V_R$ typical	2	A

ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS	
Maximum forward voltage drop per leg See fig. 1	$V_{FM}^{(1)}$	40 A	$T_J = 25\text{ }^{\circ}\text{C}$	0.36	V	
		80 A		0.45		
		40 A	$T_J = 75\text{ }^{\circ}\text{C}$	0.32		
		80 A		0.42		
Maximum reverse leakage current per leg See fig. 2	$I_{RM}^{(1)}$	$T_J = 100\text{ }^{\circ}\text{C}$	$V_R = 12\text{ V}$	890	mA	
			$V_R = 5\text{ V}$	540		
		$T_J = 25\text{ }^{\circ}\text{C}$	$V_R = \text{Rated } V_R$	20		
				$T_J = 100\text{ }^{\circ}\text{C}$		
Maximum junction capacitance per leg	C_T	$V_R = 5\text{ V}_{DC}$ (test signal range 100 kHz to 1 MHz) $25\text{ }^{\circ}\text{C}$		3600	pF	
Typical series inductance per leg	L_S	Measured lead to lead 5 mm from package body		5.5	nH	
Maximum voltage rate of change	dV/dt	Rated V_R		10 000	V/ μs	

Note(1) Pulse width < 300 μs , duty cycle < 2 %**THERMAL - MECHANICAL SPECIFICATIONS**

PARAMETER	SYMBOL	TEST CONDITIONS	VALUES	UNITS
Maximum junction and storage temperature range	T_J, T_{Stg}		- 55 to 125	$^{\circ}\text{C}$
Maximum thermal resistance, _____ per leg junction to case _____ per package	R_{thJC}	DC operation (see fig. 4)	0.85	$^{\circ}\text{C/W}$
		DC operation	0.42	
Typical thermal resistance, case to heatsink	R_{thCS}	Mounting surface, smooth and greased Device flatness < 5 mils	0.30	
Approximate weight			7.8	g
			0.28	oz.
Mounting torque	minimum		40 (35)	kgf · cm
	maximum		58 (50)	(lbf · in)
Marking device		Case style D-61	85CNQ015A	
		Case style D-61-8-SM	85CNQ015ASM	
		Case style D-61-8-SL	85CNQ015ASL	

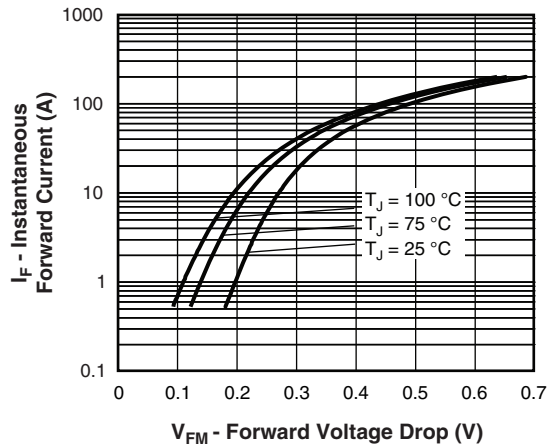


Fig. 1 - Maximum Forward Voltage Drop Characteristics (Per Leg)

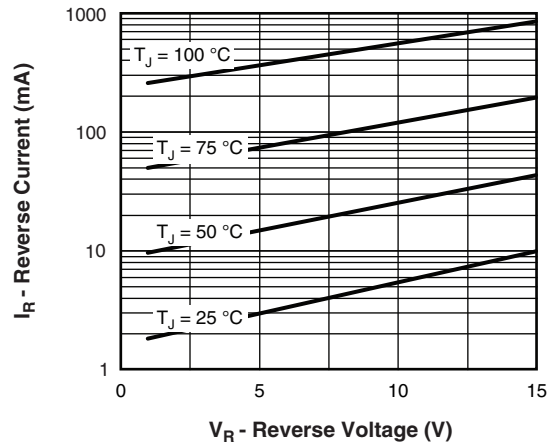


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage (Per Leg)

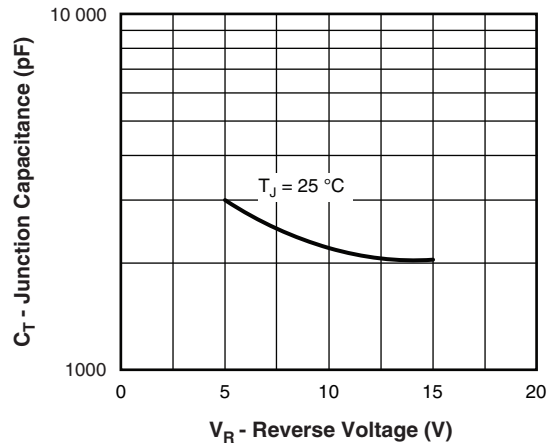


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage (Per Leg)

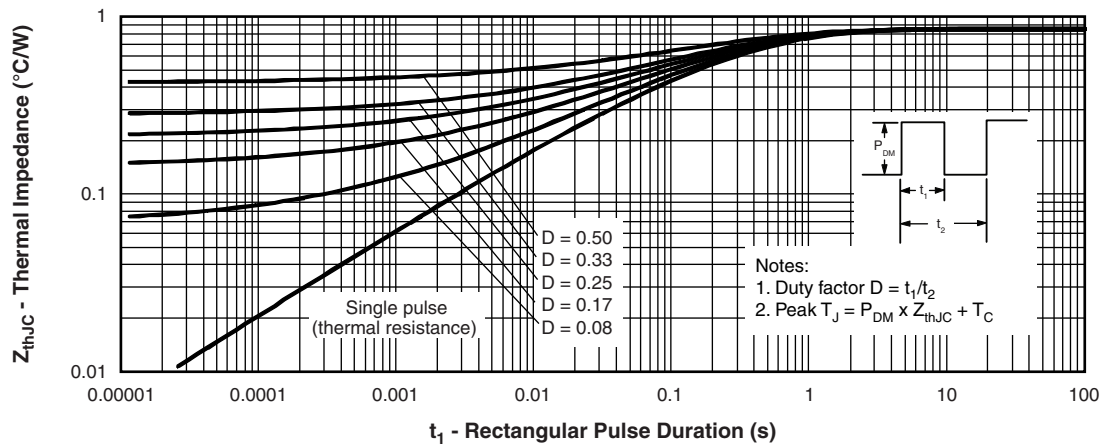


Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics (Per Leg)

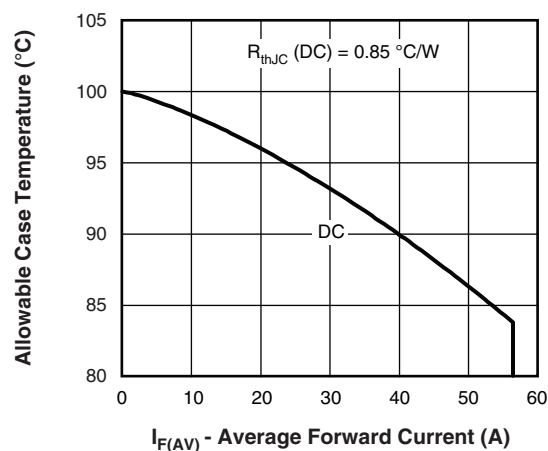


Fig. 5 - Maximum Allowable Case Temperature vs. Average Forward Current (Per Leg)

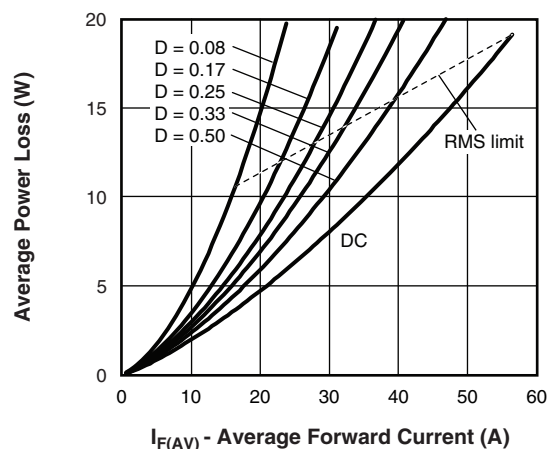


Fig. 6 - Forward Power Loss Characteristics (Per Leg)

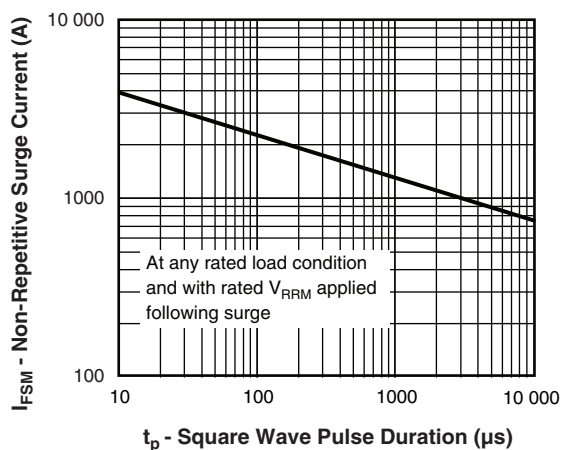


Fig. 7 - Maximum Non-Repetitive Surge Current (Per Leg)

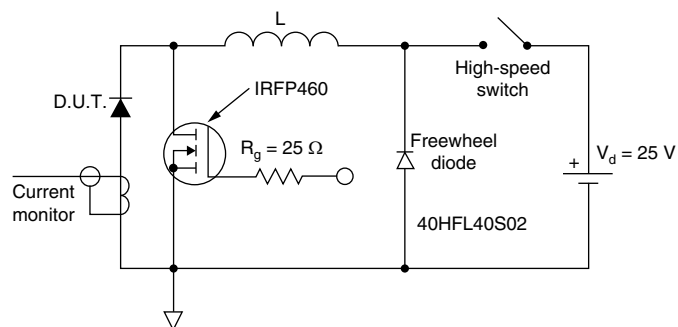


Fig. 8 - Unclamped Inductive Test Circuit



VS-85CNQ015A PbF Series

Schottky Rectifier
New Generation 3 D-61 Package, 2 x 40 A

Vishay High Power Products

ORDERING INFORMATION TABLE

Device code	VS-	85	C	N	Q	015	A	PbF
	1	2	3	4	5	6	7	8

- 1** - HPP product suffix
- 2** - Current rating (80 A)
- 3** - Circuit configuration:
 - C = Common cathode
- 4** - Package:
 - N = D-61
- 5** - Schottky "Q" series
- 6** - Voltage ratings (015 = 15 V)
- 7** - Package style:
 - A = D-61-8
 - ASM = D-61-8-SM
 - ASL = D-61-8-SL
- 8** -
 - None = Standard production
 - PbF = Lead (Pb)-free

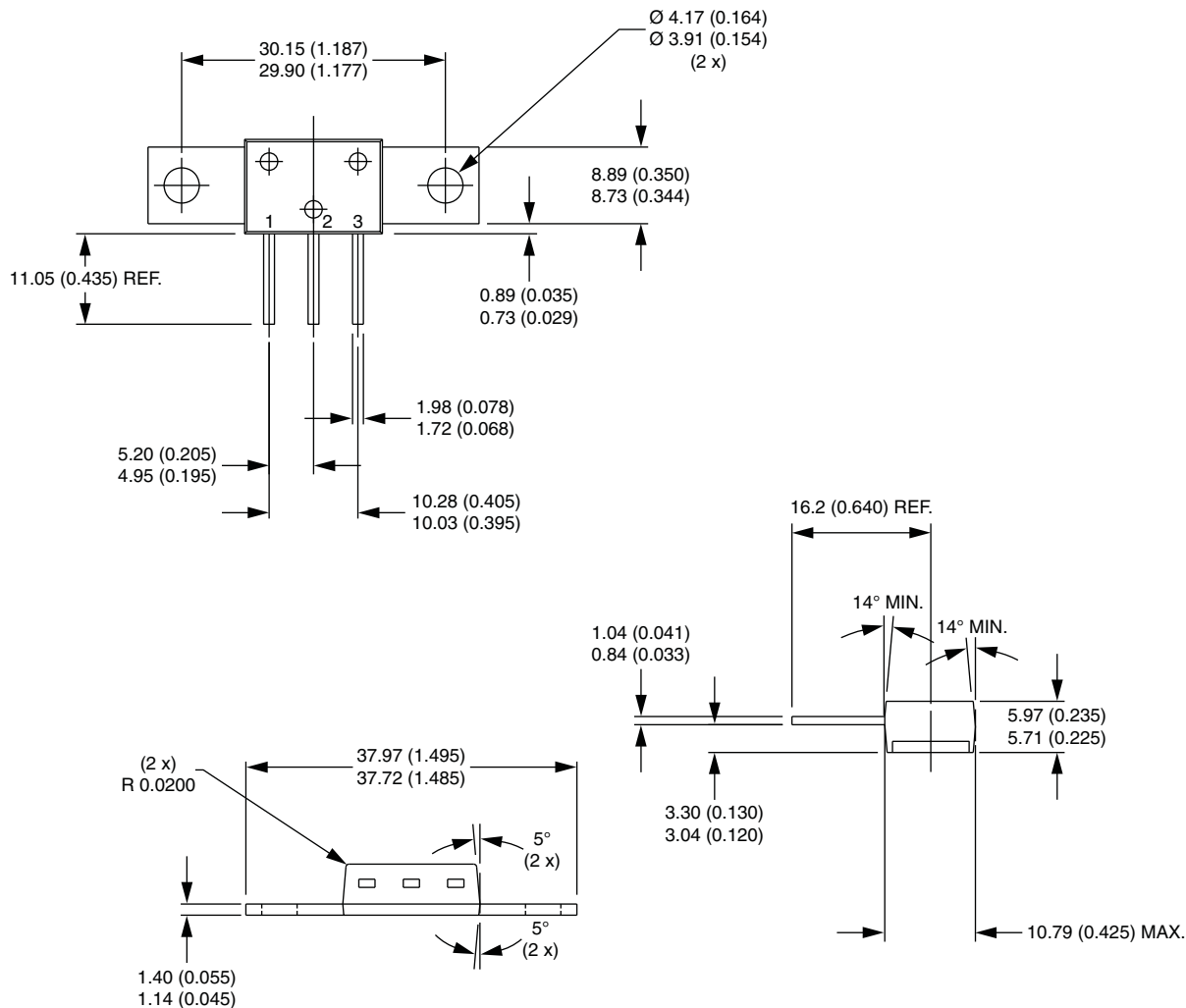
Standard pack quantity: A = 10 pieces; ASM/ASL = 20 pieces

LINKS TO RELATED DOCUMENTS	
Dimensions	www.vishay.com/doc?95354
Part marking information	www.vishay.com/doc?95356



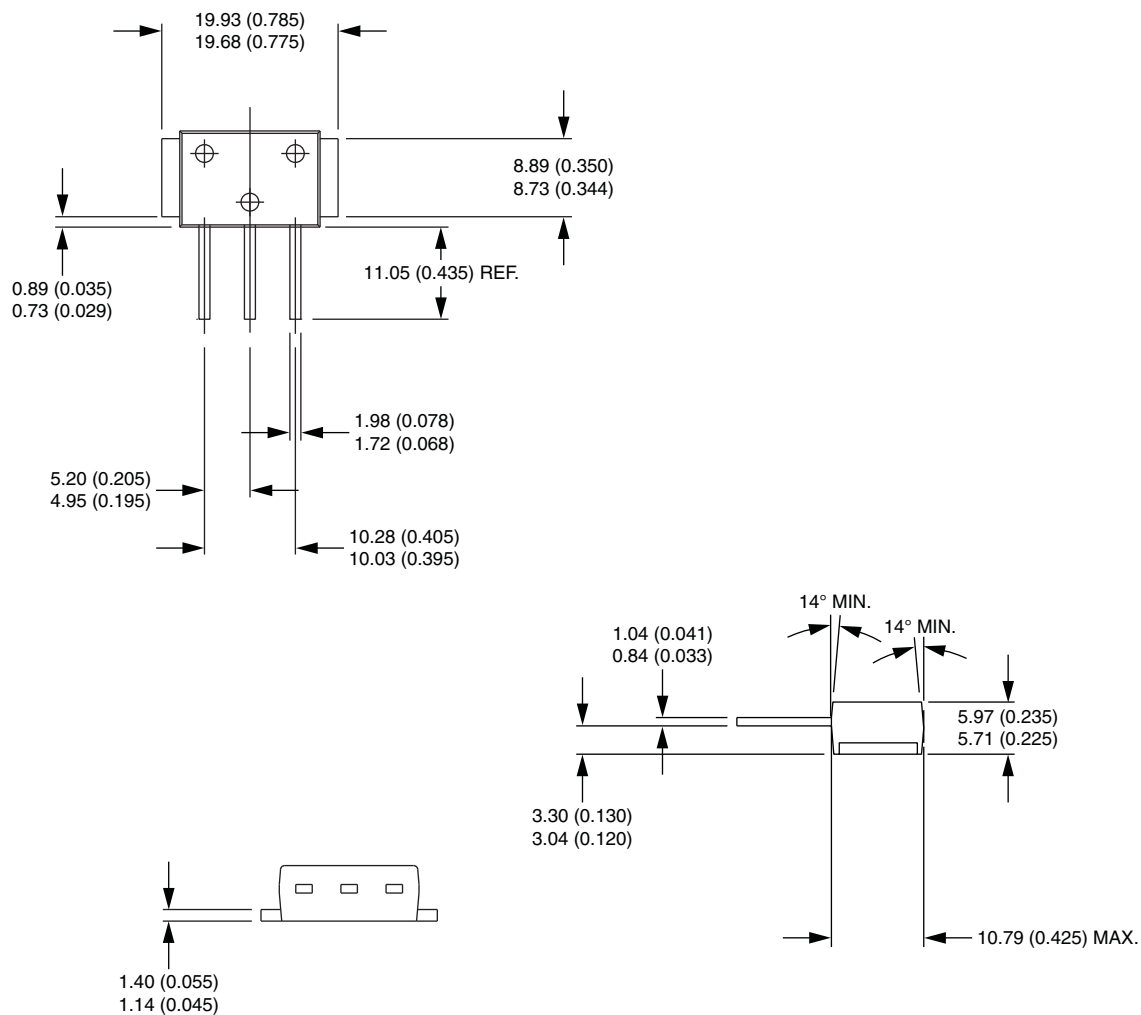
D-61-8, D-61-8-SM, D-61-8-SL

DIMENSIONS - D-61-8 in millimeters (inches)



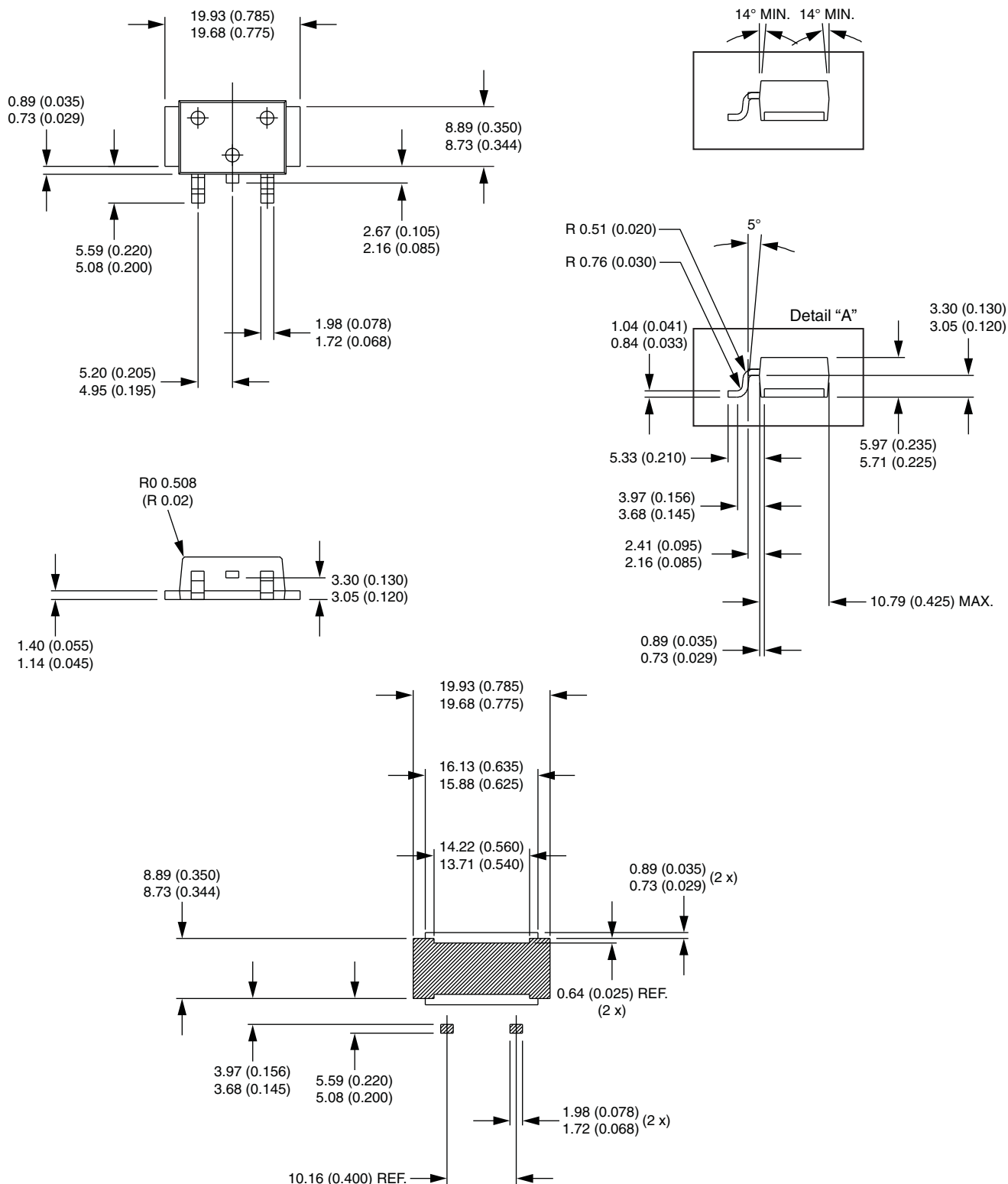


DIMENSIONS - D-61-8-SM in millimeters (inches)





DIMENSIONS - D-61-8-SL in millimeters (inches)





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