

# FEATURES

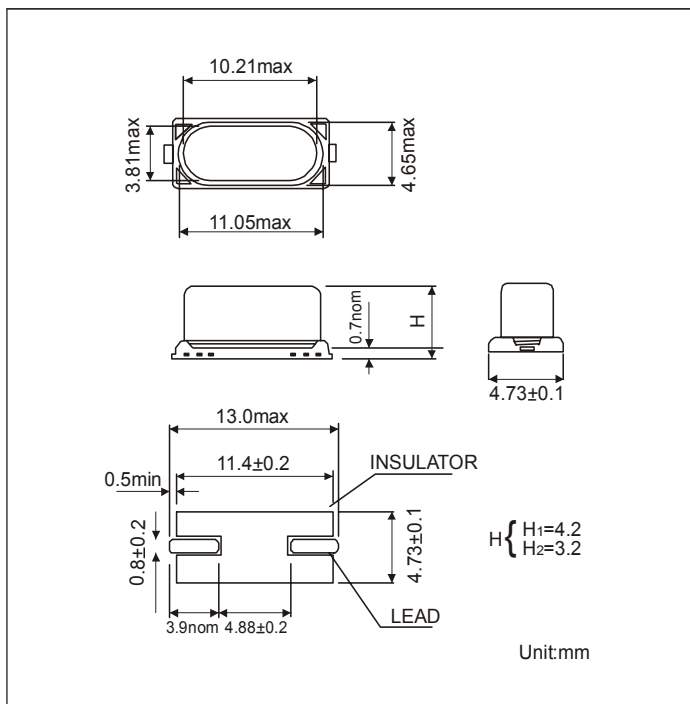
- HIGH RELIABILITY FOR LOW COST
- LOW PROFILE - 3.2 MM MAX. PACKAGE HEIGHT
- EXTENDED TEMPERATURE RANGE TO -40/+125°C
- TUNABLE WITH EXTERNAL CAPACITY
- CHEAPEST AVAILABLE SMD-CRYSTAL
- EXCELLENT CLOCK SIGNAL GENERATOR FOR CPU'S
- QUALIFIED FOR QUOTMOTIVE APPLICATIONS

<b>PROCESSOR TYPE</b>		<b>AMD AM188ES-20</b>
<b>SERIES</b>		HC-49/US-SMD
<b>PACKAGE HEIGHT</b>	<b>STANDARD</b>	4.2 MM MAX.
	<b>OPTION</b>	4.0 MM MAX AND 3.2 MM MAX.
<b>FREQUENCY</b>		20.2752 MHz
<b>MODE OF VIBRATION</b>		AT-FUNDAMENTAL
<b>RESONANCE RESISTANCE</b>		40 Ω MAX.
<b>FREQUENCY TOLERANCE AT 25°C</b>		+/-30 PPM
<b>WORKING TEMPERATURE RANGE</b>		-20/+70°C
<b>OPERABLE TEMPERATURE RANGE</b>		-30/+80°C
<b>TEMPERATURE STABILITY</b>		+/-50 PPM
<b>LOAD CAPACITANCE</b>		30 pF
<b>SHUNT CAPACITANCE</b>		7 PF MAX.
<b>DRIVE LEVEL</b>		0.5 mW
<b>AGING</b>		+5 PPM MAX. PER YEAR
<b>INSULATION RESISTANCE</b>		>500 MΩ DC/100V +/-10%
<b>PACKAGE</b>		TAPE AND REEL (1.000 PCS PER REEL)
<b><u>OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION</u></b>		

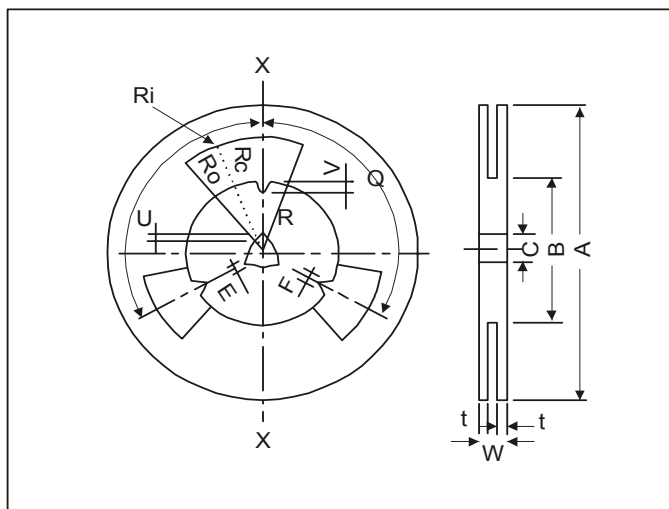
## PART NUMBERING SYSTEM

<b>EXAMPLE</b>	HC-49/US-SMD 20.2752 MHz AMD-AM188ES-20
<b>TYPE</b>	HC-49/US-SMD
<b>PACKAGE HEIGHT</b>	BLANK FOR 4.2 MM
	4.0 OR 3.2 MM
<b>PROCESSOR TYPE</b>	AMD AM188ES-20

**OUTLINE DRAWING OF HC-49/US-SMD**

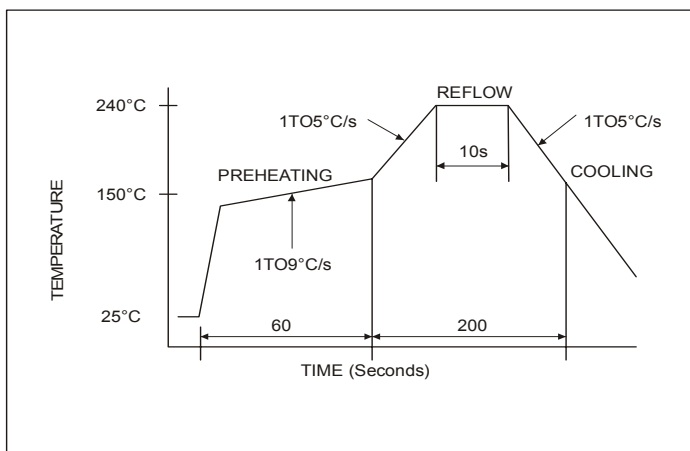


**REEL SPECIFICATION**

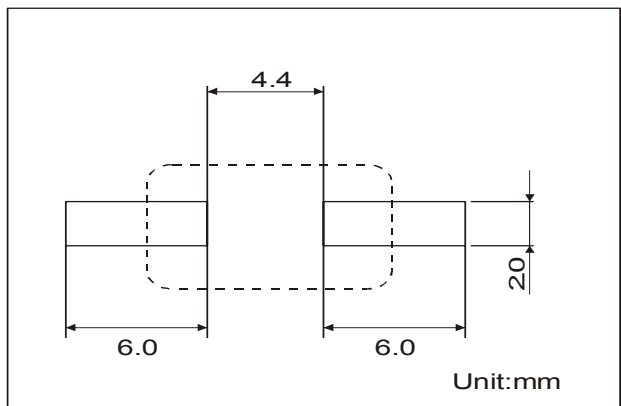


Description		Symbol	Dimensions	
Flange	Diameter	A	$\varnothing 330 \pm 2.0$	
	Thickness	t	$2.4 \pm 0.2$	
	Width Between Flanges	W	$24.4^{+2.0}_{-0}$	
Center Core	Outline Diameter	B	$\varnothing 100 \pm 2.0$	
	Center Core Slit	Width	F	$2.3 \pm 1.0$
		Deep	V	$6 \pm 1.0$
		Position	Q	$120^\circ \pm 3^\circ$
	Spindle Diameter	C	$\varnothing 13 \pm 0.5$	
	Key Seats	Width	E	$2.5^{+0.5}_{-0}$
Deep		U	$5 \pm 0.5$	
Position		Q	$120^\circ \pm 3^\circ$	
Fenestra	Outline Radius	R0	$R90 \pm 1.0$	
	Inline Radius	Ri	$R40 \pm 1.0$	
	Rounded Corners	Rc	R5	
	Open Angle	R	$40^\circ \pm 2^\circ$	

**REFLOW SOLDER PROFILE**



**RECOMMENDED PAD LAYOUT**



**TAPING SPECIFICATION**

