HIGH VOLTAGE NPN TRANSISTOR APT17

General Description

The APT17 is high voltage, small signal NPN transistor.

The APT17 is available in SOT-23 and TO-92 packages.

Features

- High Collector-Emitter Voltage: 480V

Applications

- High Voltage and Low Standby Power Circuit for BCD Solution

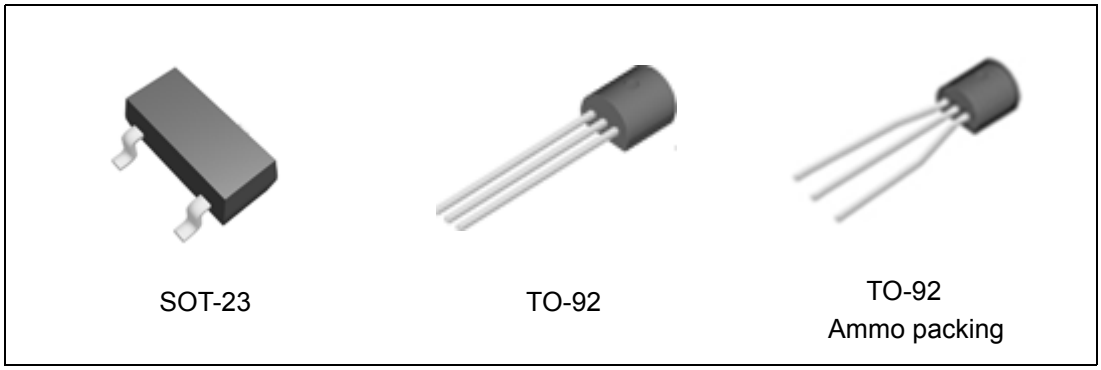


Figure 1. Package Types of APT17

Pin Configuration

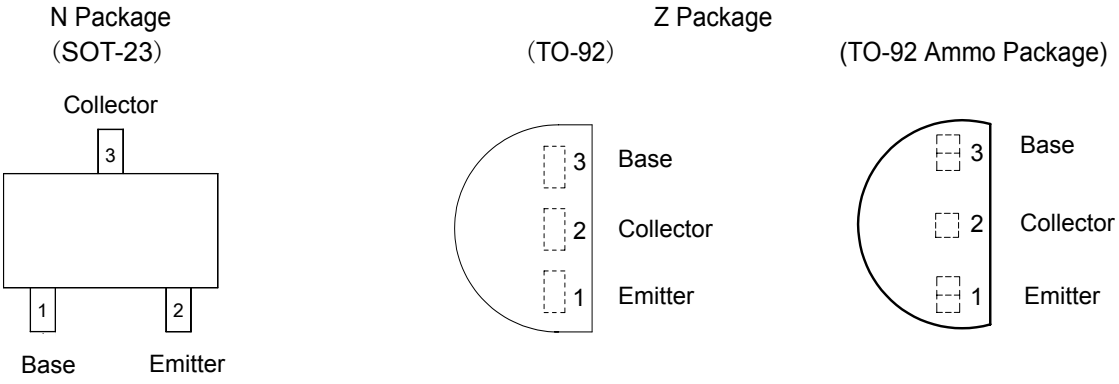
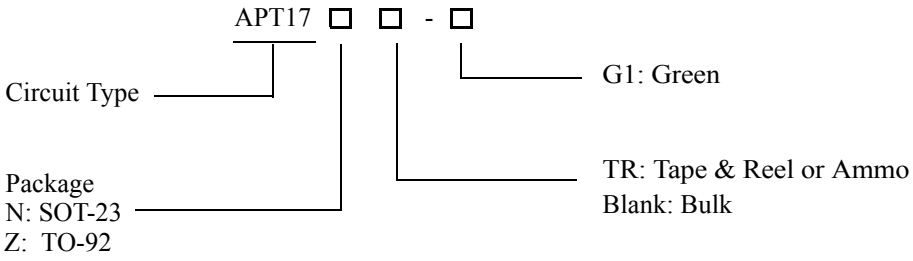


Figure 2. Pin Configurations of APT17 (Top View)

HIGH VOLTAGE NPN TRANSISTOR APT17

Ordering Information



Package	Part Number	Marking ID	Packing Type
SOT-23	APT17NTR-G1	GD8	Tape & Reel
TO-92	APT17Z-G1	APT17Z-G1	Bulk
	APT17ZTR-G1	APT17Z-G1	Ammo

BCD Semiconductor's products, as designated with "G1" suffix in the part number, are RoHS compliant and Green.

Absolute Maximum Ratings (Note 1)

Parameter		Symbol	Value	Unit
Collector-Emitter Voltage (V_{BE}=0)		V_{CES}	700	V
Collector-Emitter Voltage (I_B=0)		V_{CEO}	480	V
Emitter-Base Voltage (I_C=0)		V_{EBO}	10	V
Collector Current		I_C	50	mA
Collector Peak Current (Pulse)		I_{CM}	100	mA
Base Current		I_B	25	mA
Base Peak Current (Pulse)		I_{BM}	50	mA
Power Dissipation, T_A=25°C	SOT-23	P_{TOT}	0.2	W
	TO-92		0.5	
Operating Junction Temperature			150	°C
Storage Temperature Range			-55 to 150	°C

Note 1: Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "Recommended Operating Conditions" is not implied. Exposure to "Absolute Maximum Ratings" for extended periods may affect device reliability.

HIGH VOLTAGE NPN TRANSISTOR APT17

Thermal Characteristics

Parameter		Symbol	Value	Unit
Thermal Resistance (Junction-to-Ambient)	SOT-23	θ_{JA}	625	°C/W
	TO-92		250	

Electrical Characteristics

(T_C=25°C, unless otherwise specified.)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector Cut-off Current (V_{BE}=-1.5V)	I_{CEV}	V_{CE}=700V			10	μA
Collector-Emitter Sustaining Voltage (I_B=0)	V_{CEO} (sus)	I_C=300μA	480			V
DC Current Gain	h_{FE}	I_C=300μA, V_{CE}=20V	20	25	40	
		I_C=10mA, V_{CE}=20V	20		50	

Typical Performance Characteristics

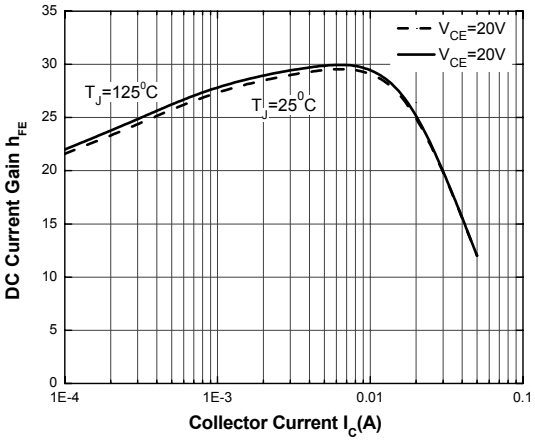


Figure 3. DC Current Gain

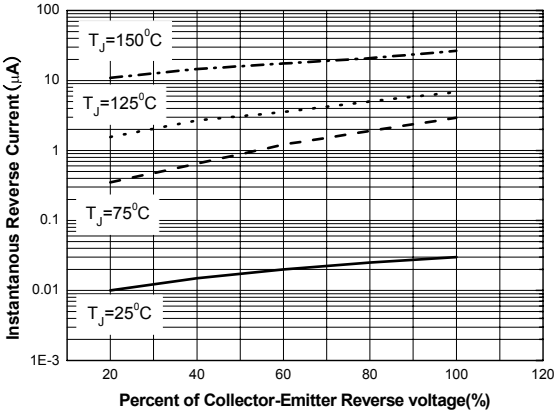
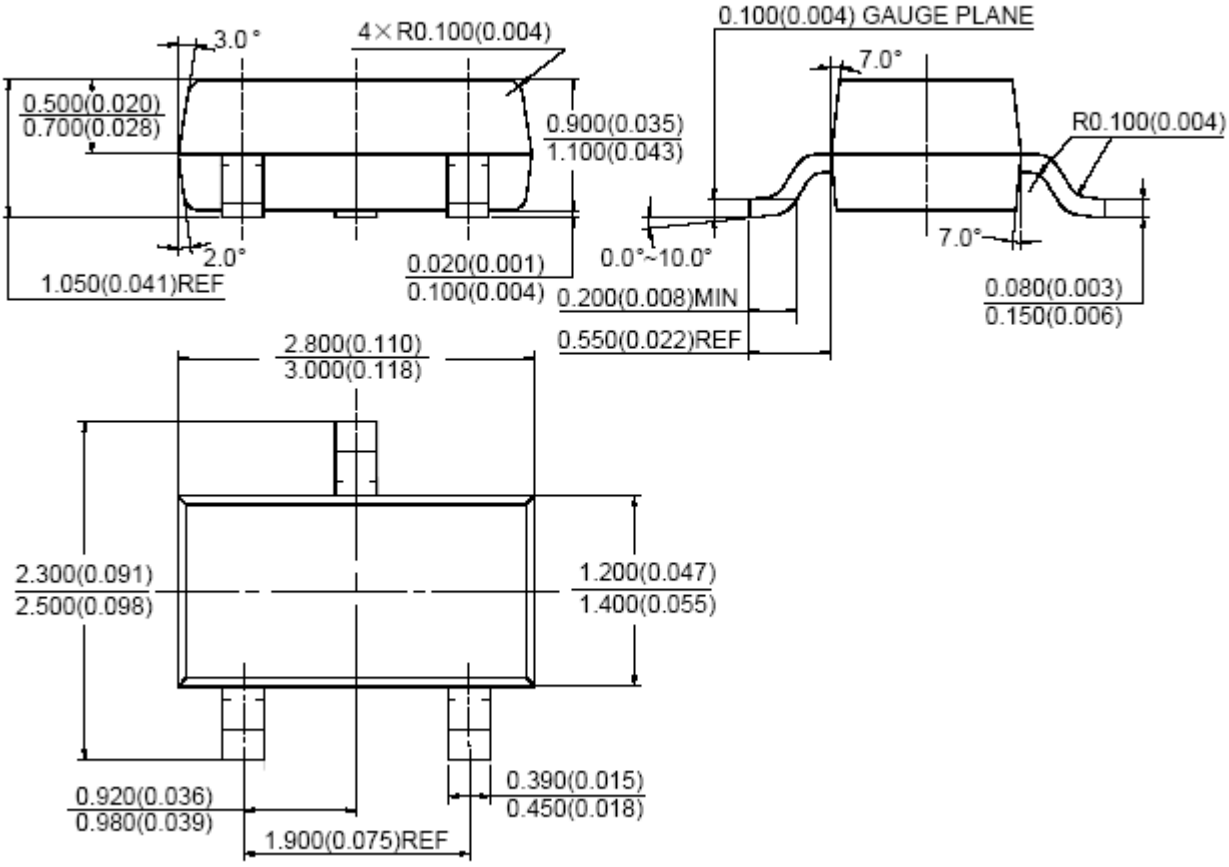


Figure 4. Typical Reverse Characteristics

HIGH VOLTAGE NPN TRANSISTOR **APT17**

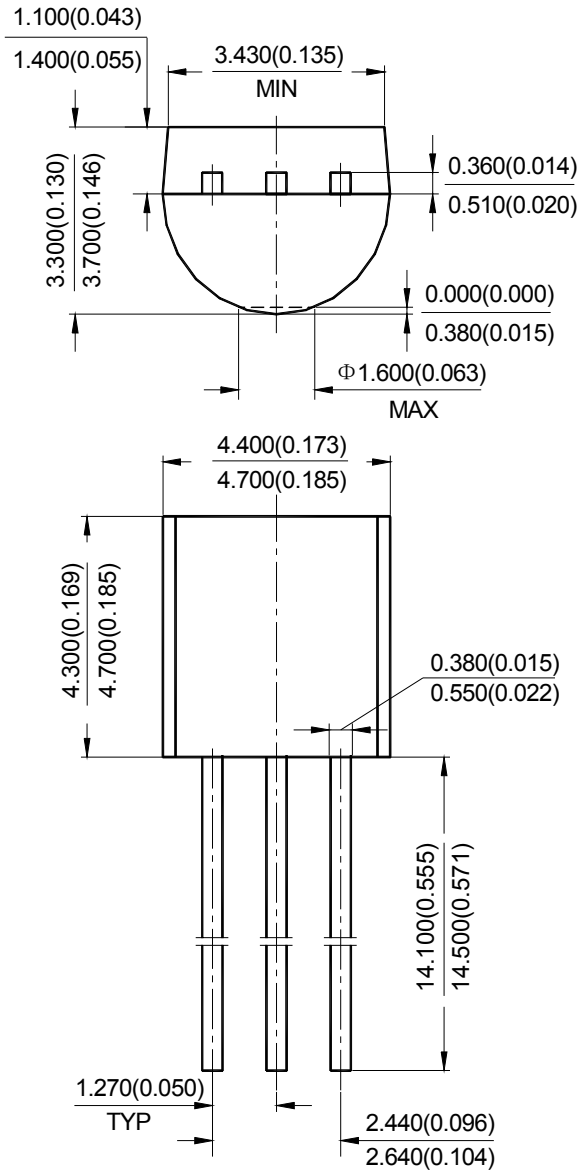
Mechanical Dimensions

SOT-23 **Unit: mm(inch)**



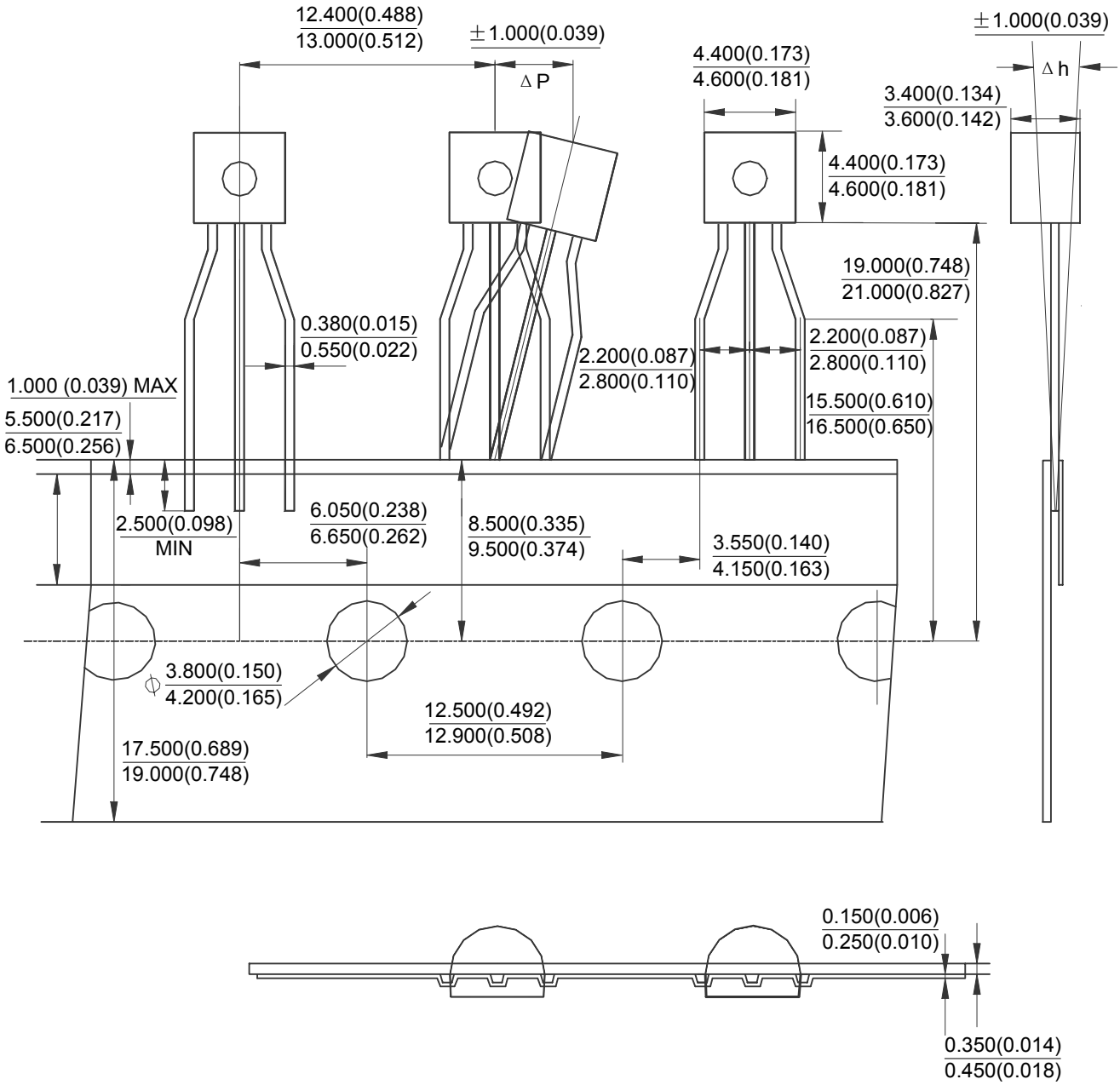
Mechanical Dimensions (Continuted)

TO-92 **Unit: mm(inch)**



Mechanical Dimensions (Continuted)

TO-92 Ammo Packing **Unit: mm(inch)**



Soldering Information

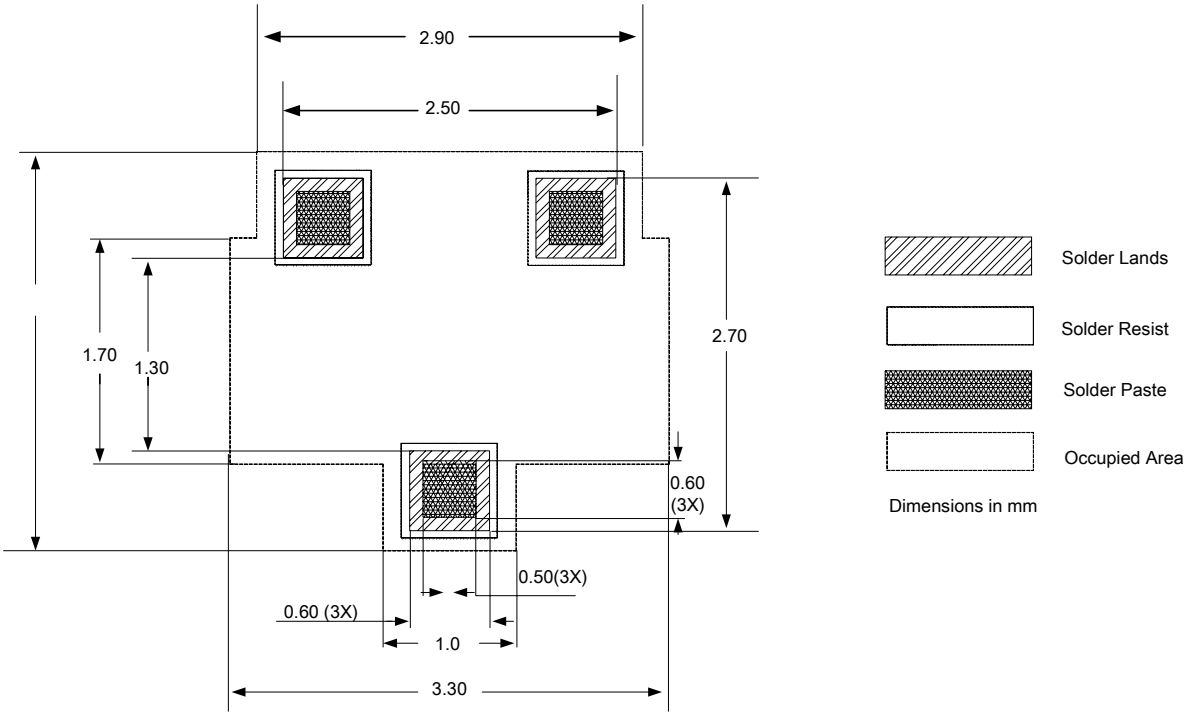


Figure 5. Reflow Soldering Footprint SOT-23

Soldering Information(Continuted)

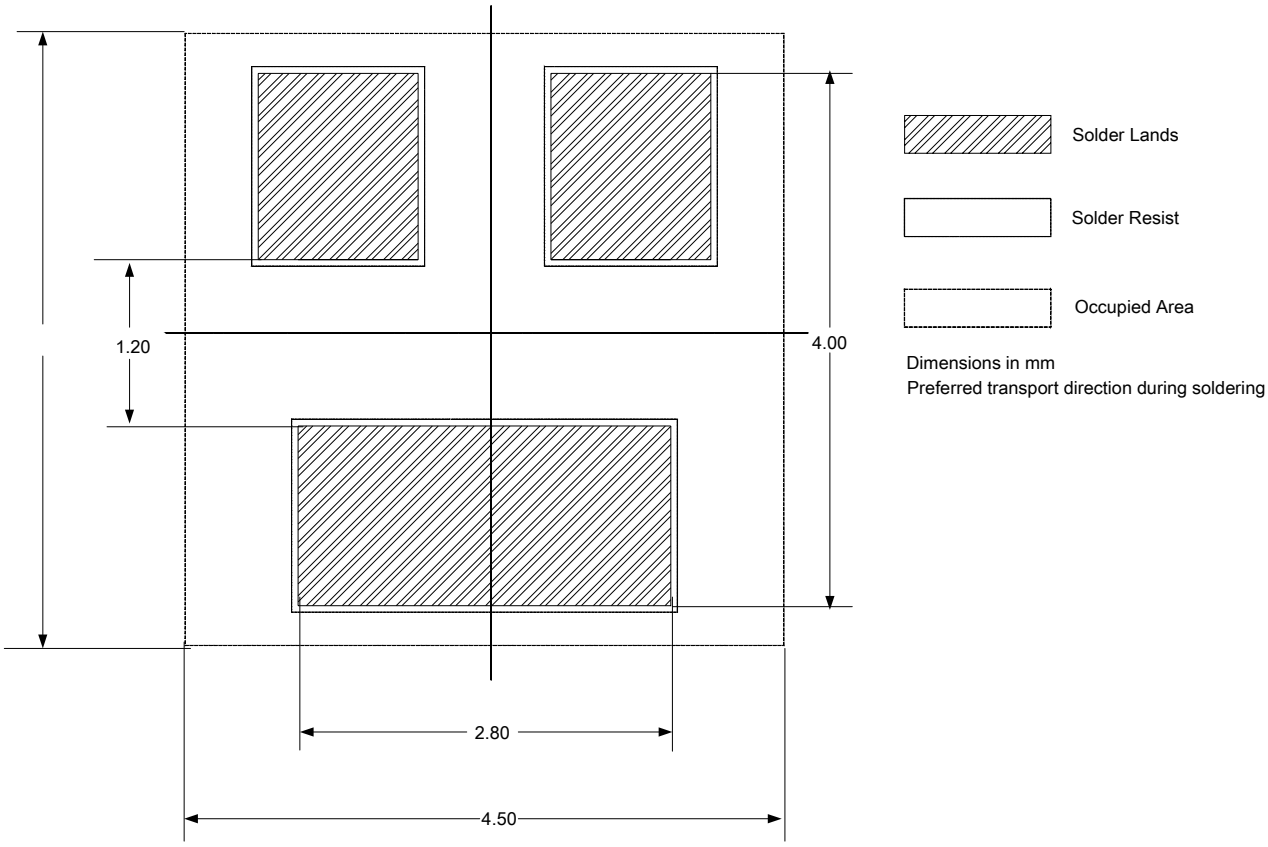


Figure 6. Waving Soldering Footprint SOT-23



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