

Bias Resistor Transistors

PNP Silicon Surface Mount Transistors with Monolithic

Bias Resistor Network

FEATURES

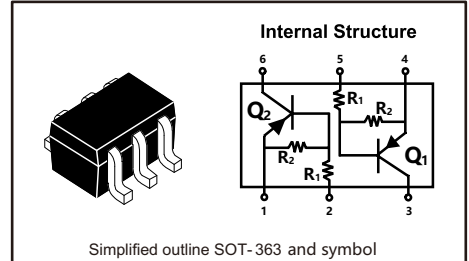
- Reduces board space
- Simplifies Circuit Design
- Reduces Board Space and Component Count

Mechanical Data

- Case: SOT-363
- $R_1 = 4.7K\Omega$ (Typ) , $R_2 = 47K\Omega$ (Typ)

PINNING

PIN	DESCRIPTION
2,5	BASE
1,4	EMITTER
3,6	COLLECTOR



MAXIMUM RATINGS (Ta =25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Output current	I_c	-100	mA
Power dissipation	P_D	200	mW
Thermal Resistance – Junction-to-Ambient	$R_{\theta JA}$	625	°C/W
Junction temperature	T_J	150	°C
Range of storage temperature	T_{stg}	-55~ +150	°C

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CB0}$	$I_c = -10\mu A$, $I_E = 0$	-50			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_c = -2mA$, $I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1mA$, $I_c = 0$	-5			V
Collector-Base Cut off Current	I_{CB0}	$V_{CB} = -50V$, $I_E = 0$			-100	nA
Collector-Emitter Cut off Current	I_{CEO}	$V_{CE} = -50V$, $I_B = 0$			-0.5	μA
Emitter-Base Cut off Current	I_{EBO}	$V_{EB} = -6V$, $I_c = 0$			-0.18	mA
DC Current Gain	h_{FE}	$V_{CE} = -10V$, $I_c = -5mA$	80			
Output Voltage (on)	V_{OL}	$V_{CE} = -5.0V$, $V_{BE} = -2.5V$, $R_L = 1.0K\Omega$			-0.2	V
Output Voltage (off)	V_{OH}	$V_{CE} = -5.0V$, $V_{BE} = -0.5V$, $R_L = 1.0K\Omega$	-4.9			V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_c = -10mA$, $I_B = -1mA$			-0.25	V
Input Voltage (off)	$V_{I(off)}$	$V_{CE} = -5V$, $I_c = -100\mu A$	-0.5			V
Input Voltage (on)	$V_{I(on)}$	$V_{CE} = -0.3V$, $I_c = -2mA$			-1.3	V
Input resistance	R_1		3.3	4.7	6.1	$K\Omega$
Input resistance	R_2		32.9	47	61	$K\Omega$
Resistance ratio	R_2 / R_1		8	10	12	



Typical Performance Characteristics

Fig 1. Power Derating Curve

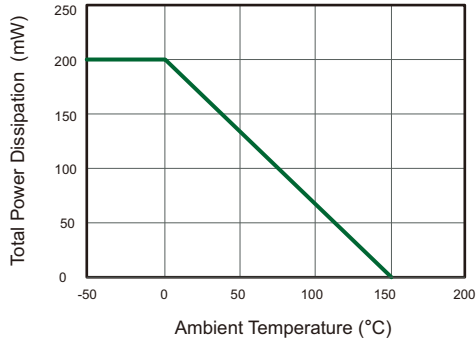


Fig 2. $V_{CE(SAT)}$ VS. I_c

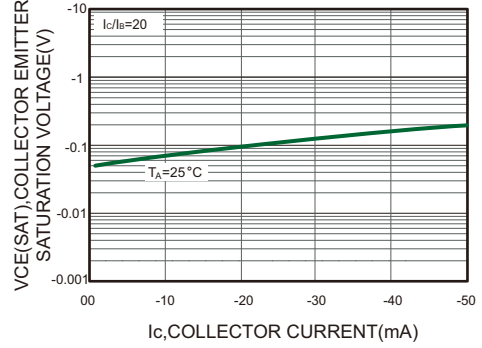


Fig.3 DC Current Gain

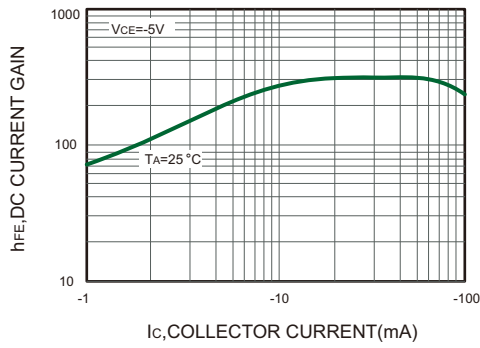
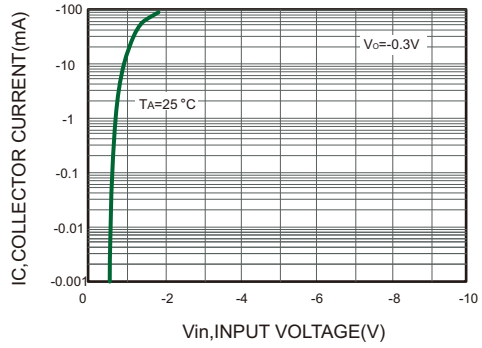
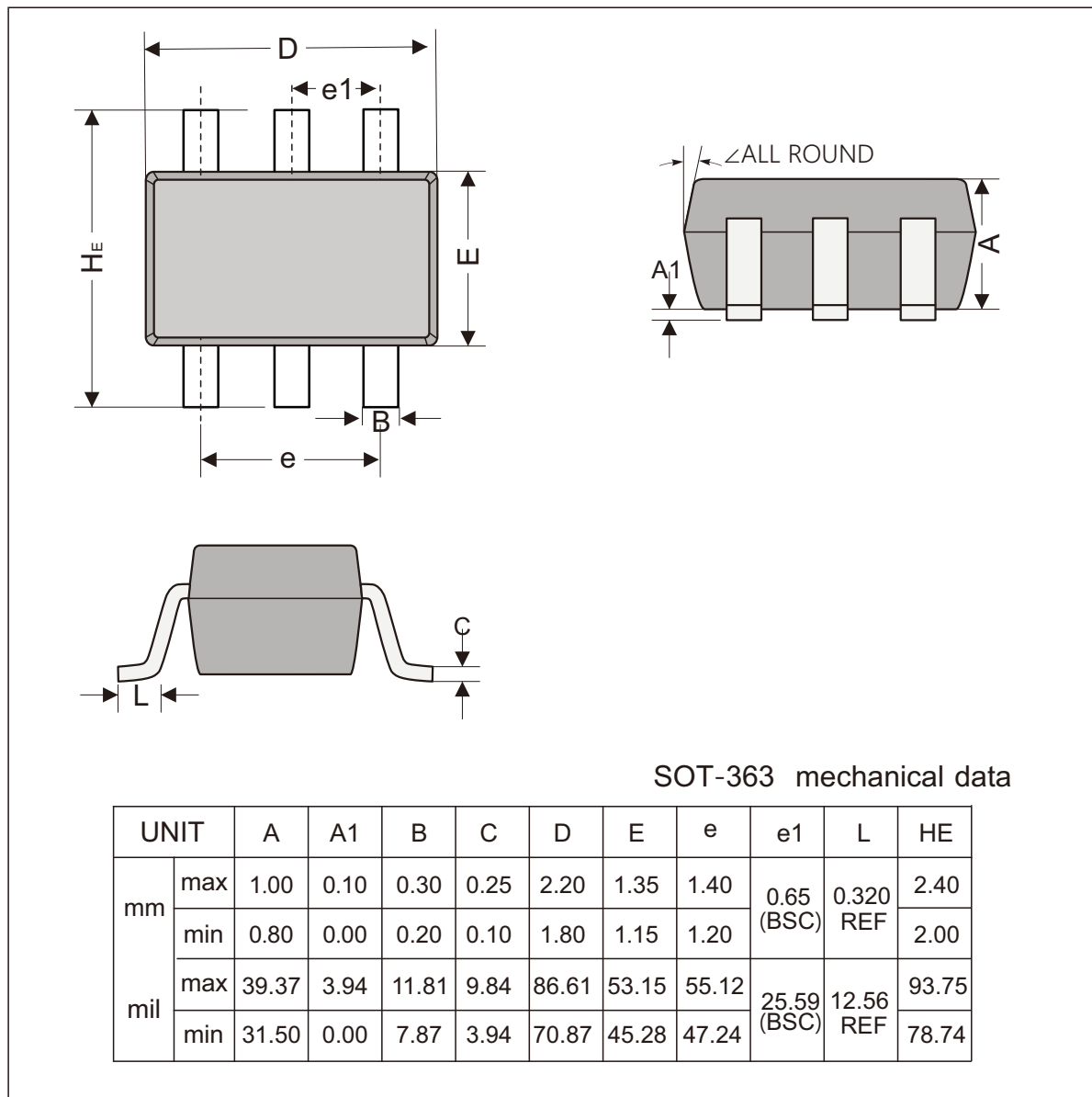


Fig.4 Collector Current VS. Input Voltage

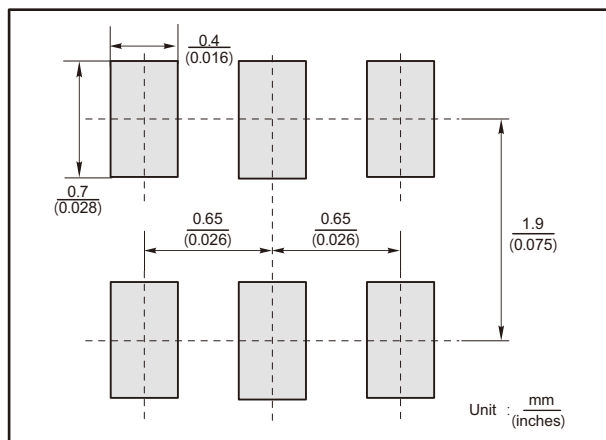




SOT-363 Package Outline Dimensions



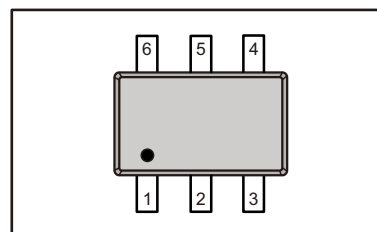
The recommended mounting pad size



Marking

Type number	Marking code
JDTA243ZWH	Z43

Pin Point





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