

**SOT-23-3L DIGITAL TRANSISTORS
TRANSISTORS(PNP)**


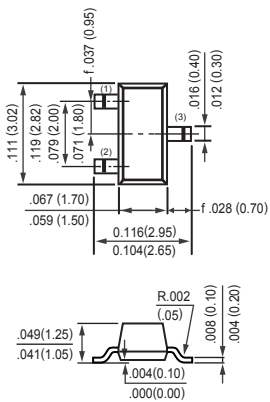
FEATURES

- * Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors.(see equivalent circuit).
- * The bias resistors consist of thin-film resistors with complete isolation to without connecting external input. They also have the advantage of almost completely eliminating parasitic effects.
- * Only the on/off conditions need to be set for operation marking device design easy.

MECHANICAL DATA

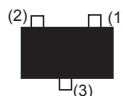
- * Case: Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.009 gram

SOT-23-3L

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25°C ambient temperature unless otherwise specified.



(1) BASE
(2) EMITTER
(3) COLLECTOR

MAXIMUM RATINGS (@ TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	VALUE	UNITS
Collector-Base Voltage	V _{CB0}	-50	V
Collector-Emitter Voltage	V _{CEO}	-50	V
Emitter-base Voltage	V _{EBO}	-5	V
Collector Continuous Current	I _C	-100	mA
Collector Dissipation	P _C	200	mW
Junction and storage Temperature	T _J , T _{STG}	-55 to +150	°C

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

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Collector-base breakdown voltage (I _C = -50μA, I _E =0)	V _{(BR)CBO}	-50	-	-	V
Collector-emitter breakdown voltage (I _C = -1mA, I _B =0)	V _{(BR)CEO}	-50	-	-	V
Emitter-base breakdown voltage (I _E = -50μA, I _C =0)	V _{(BR)EBO}	-5	-	-	V
Collector cut-off current (V _{CB} = -50V, I _E =0)	I _{CBO}	-	-	-0.5	μA
Emitter cut-off current (V _{EB} = -4V, I _C =0)	I _{EBO}	-	-	-0.5	μA
DC current gain (V _{CE} = -5V, I _C = -1mA)	h _{FE}	100	250	600	
Collector-emitter saturation voltage (I _C = -10mA, I _B = -1mA)	V _{CE(sat)}	-	-	-0.3	V
Transistion frequency (V _{CE} = -10V, I _C = -5mA, f=100MHz)	f _T	-	250	-	MHz
Input resistor	R ₁	7	10	13	KΩ

Note: "Fully ROHS compliant", "100% Sn plating (Pb-free)".

RATING AND CHARACTERISTICS CURVES (DTA114TKA)

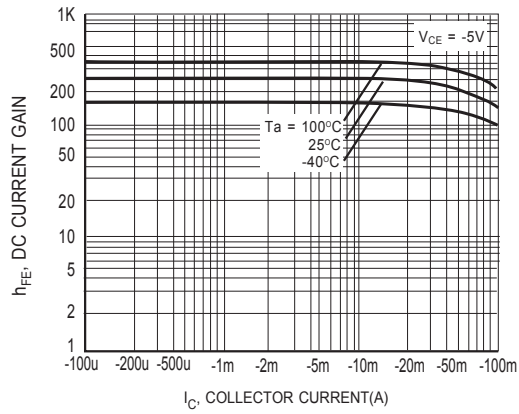


Figure 1 DC current gain vs. collector current

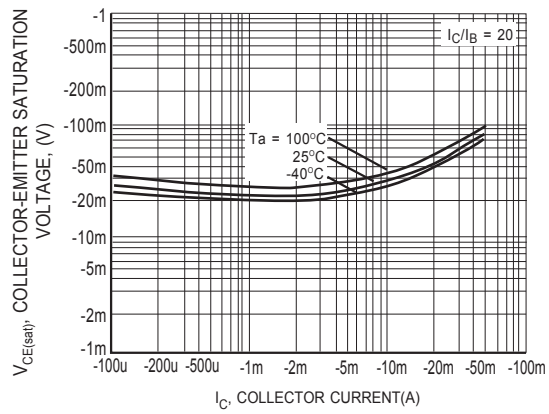


Figure 2 Collector-emitter saturation voltage vs. collector current

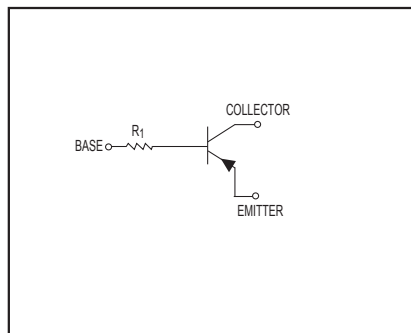


Figure3 Equivalent circuit

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