

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

FEATURES

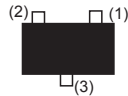
- * Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors.(see equivalent circuit).
- * The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost 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: 0.008 gram

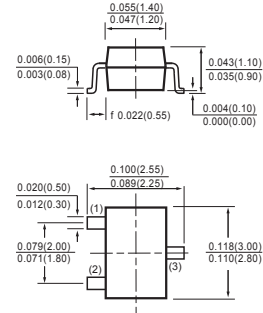
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.



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

SOT-23



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

RATINGS	SYMBOL	VALUE	UNITS
Collector-base voltage	$V_{(BR)CBO}$	-50	V
Collector-emitter voltage	$V_{(BR)CEO}$	-50	V
Emitter-base voltage	$V_{(BR)EBO}$	-5	V
Collector current	I_C	-100	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~150	°C

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

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Collector-base breakdown voltage ($I_C = -50\mu A$)	$V_{(BR)CBO}$	-50	-	-	V
Collector-emitter breakdown voltage ($I_C = -1mA$)	$V_{(BR)CEO}$	-50	-	-	V
Emitter-base breakdown voltage ($I_E = -50\mu A$)	$V_{(BR)EBO}$	-5	-	-	V
Collector cut-off current ($V_{CB} = -50V$)	I_{CBO}	-	-	-0.5	μA
Emitter cut-off current ($V_{EB} = -4V$)	I_{EBO}	-	-	-0.5	μA
Collector-emitter saturation voltage ($I_C = -5mA, I_B = -0.25mA$)	$V_{CE(sat)}$	-	-	-0.3	V
DC current transfer ratio ($V_{CE} = -5V, I_C = -1mA$)	h_{FE}	100	-	600	-
Transistion frequency ($V_{CE} = -10V, I_E = 5mA, f = 100MHz$)	f_T	-	250	-	MHz
Input resistor	R_1	3.29	4.7	6.11	$K\Omega$

RATING AND CHARACTERISTICS CURVES (DTA143TCA)

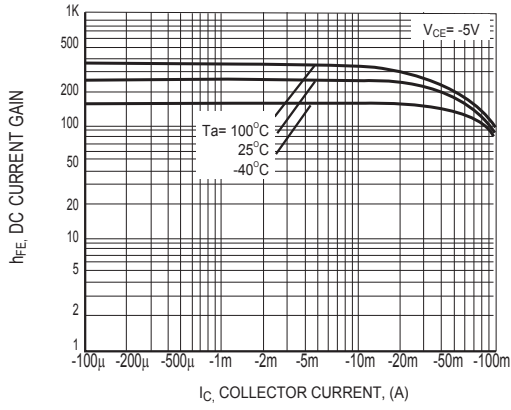


Figure1 DC current gain vs. collector current

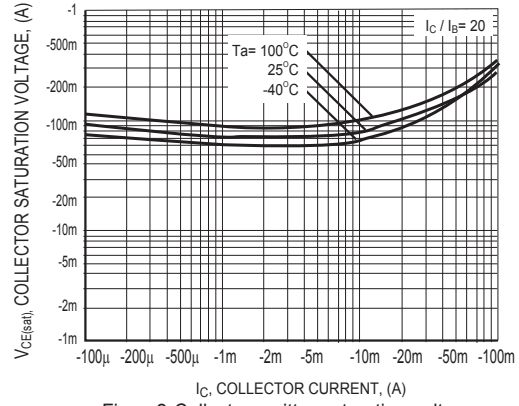


Figure2 Collector-emitter saturation voltage vs. collector current

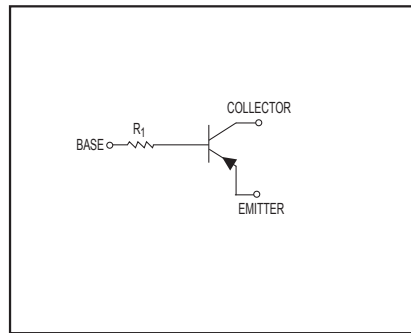


Figure3 Equivalent circuit

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