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TPDTA143TKA
PNP Digital Transistor

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Features

* Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors.
* 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: 0.009 gram

SOT23



1.BASE
2.EMITIER
3.COLLECTOR

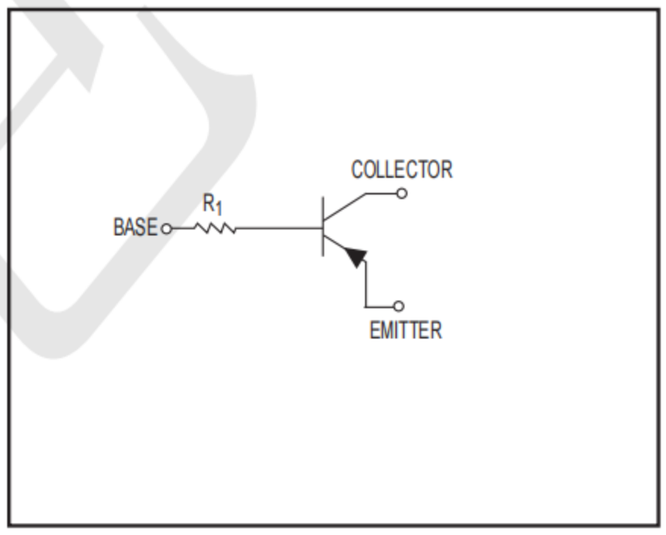


Figure3 Equivalent circuit

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

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	Tj	150	°C
Storage temperature	T_{stg}	-55~150	°C

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Electrical Characteristics (TA=25°C unless otherwise specified)

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Collector-base breakdown voltage (I_C= -50μA)	$V_{(BR)CBO}$	-50	-	-	V
Collector-emitter breakdown voltage (I_C= -1mA)	$V_{(BR)CEO}$	-50	-	-	V
Emitter-base breakdown voltage (I_E= -50μA)	$V_{(BR)EBO}$	-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	KΩ

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

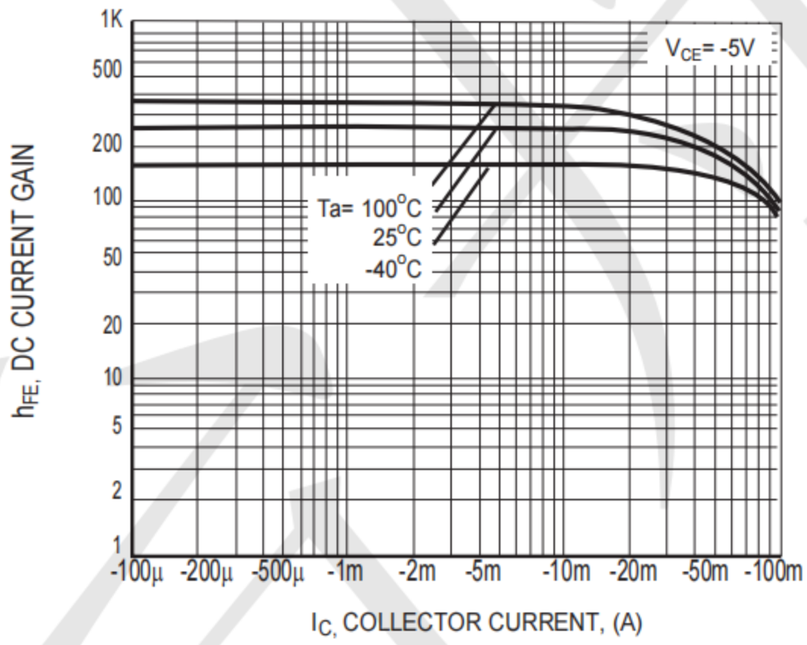


Figure1 DC current gain vs. collector current

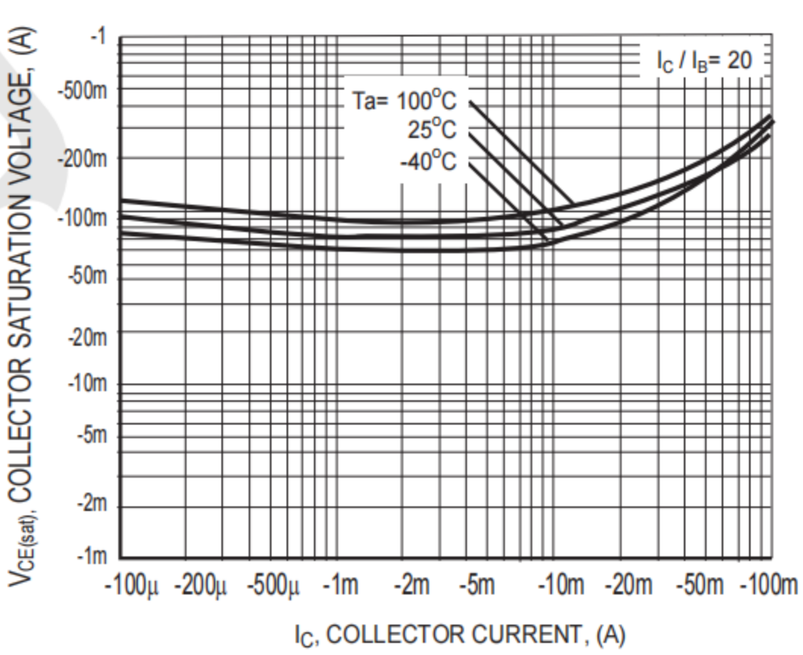
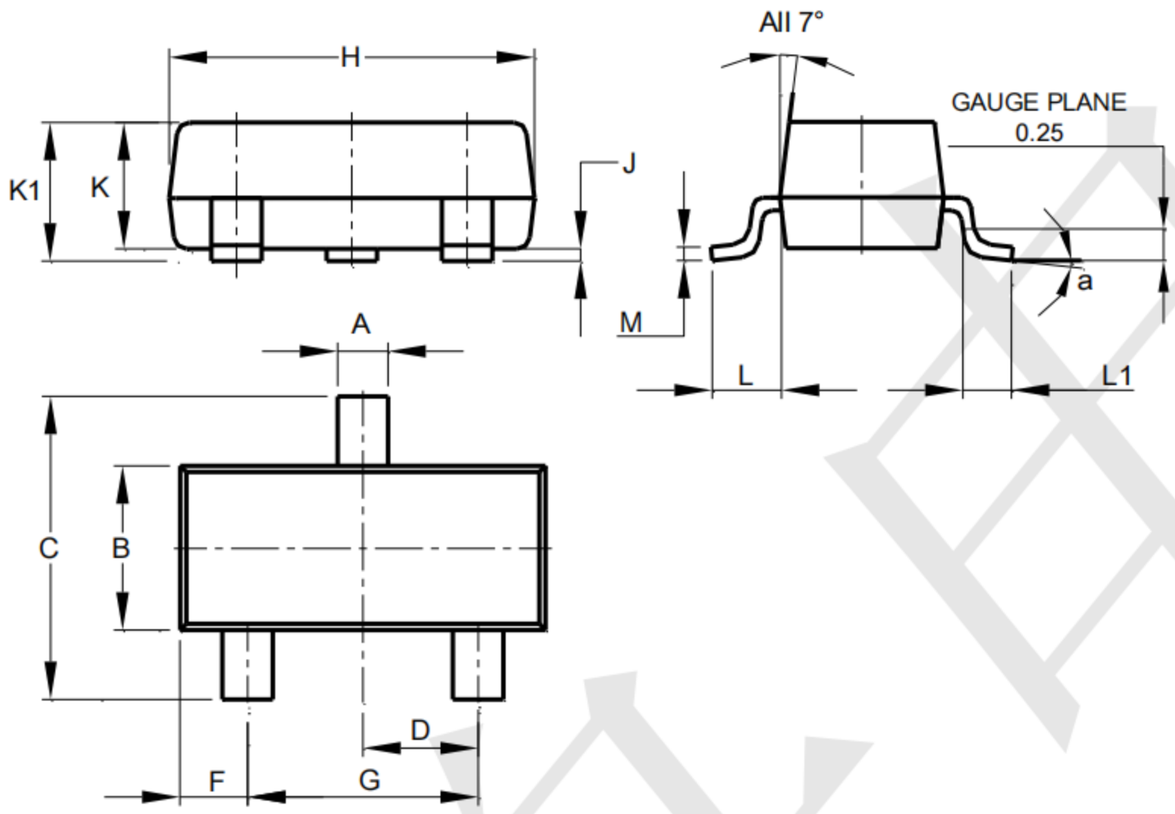


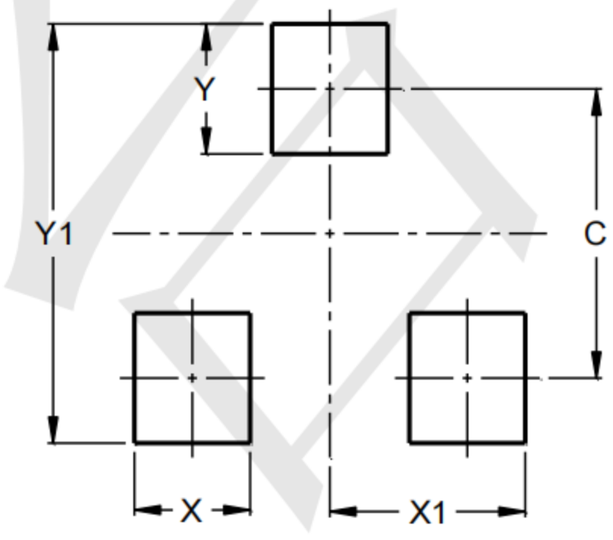
Figure2 Collector-emitter saturation voltage vs collector current

Outline Drawing - SOT23



SOT23			
Dim	**Min**	**Max**	**Typ**
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.890	1.00	0.975
K1	0.903	1.10	1.025
L	0.45	0.61	0.55
L1	0.25	0.55	0.40
M	0.085	0.150	0.110
a	0°	8°	--
All Dimensions in mm			

Land Pattern - SOT23



Dimensions	Value (in mm)
C	2.0
X	0.8
X1	1.35
Y	0.9
Y1	2.9