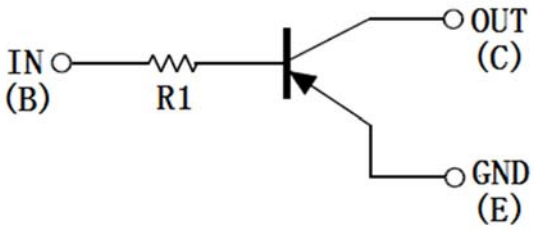
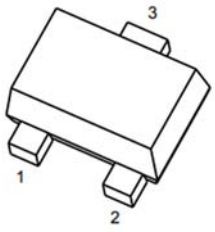
DTA143TM

PNP Digital Transistors (Built-in Resistors)





1. IN
2. GND
3. OUT

SOT-723

Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for auto matic insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

- **Package**: SOT-723
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25℃ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				93
Collector-Base Voltage	V_{CBO}	V		-50
Collector-Emitter Voltage	V_{CEO}	V		-50
Emitter-Base Voltage	V_{EBO}	V		-5
Output current	I_O	mA		-100
Power dissipation	P_D	mW		100
Junction temperature	T_J	℃		-55 to +150
Storage temperature	T_{STG}	℃		-55 to +150

■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	Ic=-50μA, I_E=0	-50		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	Ic=-1mA, I_B=0	-50		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	I_E=-50μA, I_C=0	-5		
Collector cut-off current	I_{CBO}	uA	V_{CB}=-50V, I_E=0			-0.5
Emitter cut-off current	I_{EBO}	uA	V_{EB}=-4V, I_C=0			-0.5
Collector-emitter saturation voltage	V_{CESAT}	V	I_C=-5mA, I_B=-0.25mA			-0.3
DC current gain	h_{FE}		V_{CE}=-5V, I_C=-1mA	100		600
Input resistance	R_1	kΩ		3.29	4.7	6.11
Transition frequency	f_T	MHz	V_O=-10V,I_O=-5mA,f=100MHz		250	

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	1250
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	1000

Note:

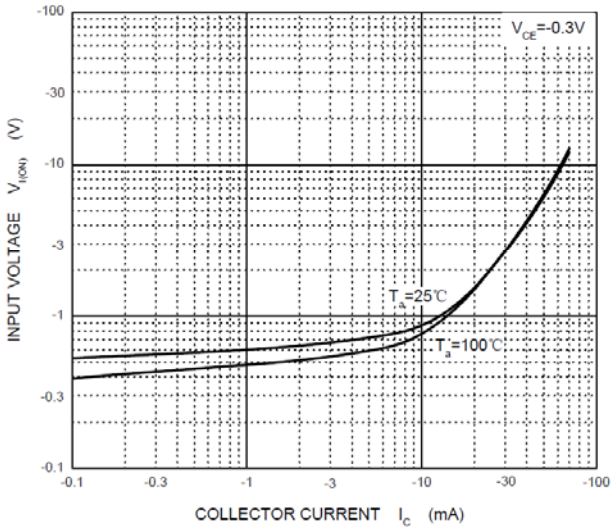
（1）Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 25.4mm*25.4mm copper pad areas

■Ordering Information

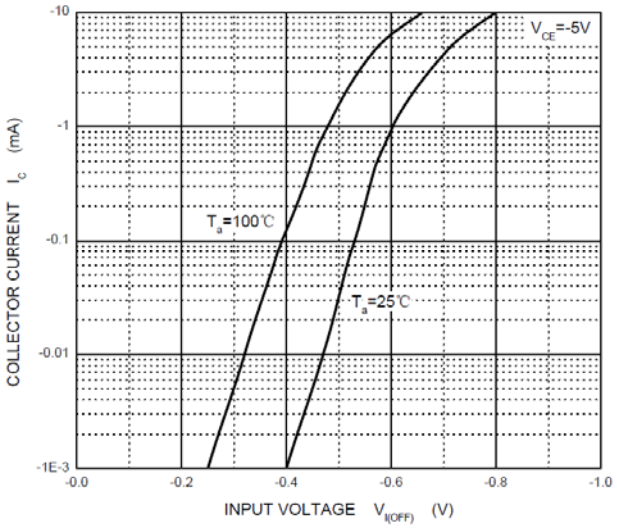
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
DTA143TM	F2	Approximate 0.0013	8000	80000	320000	7” reel

■Characteristics(Typical)

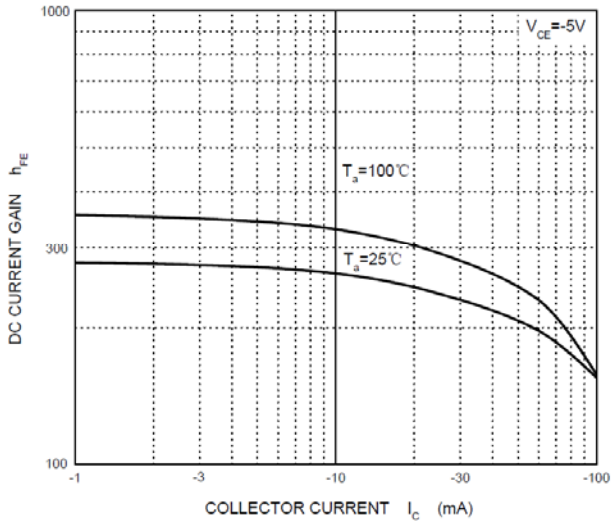
ON Characteristics



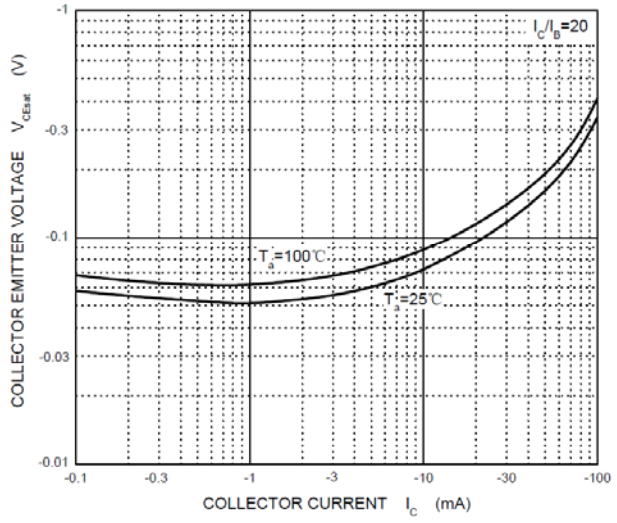
OFF Characteristics



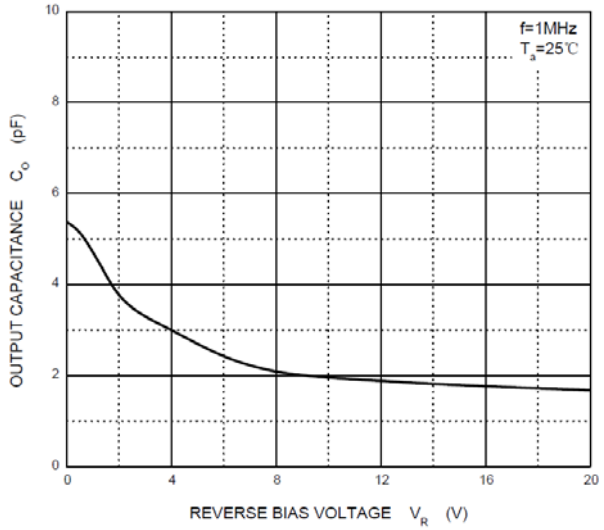
h_{FE} —— I_C



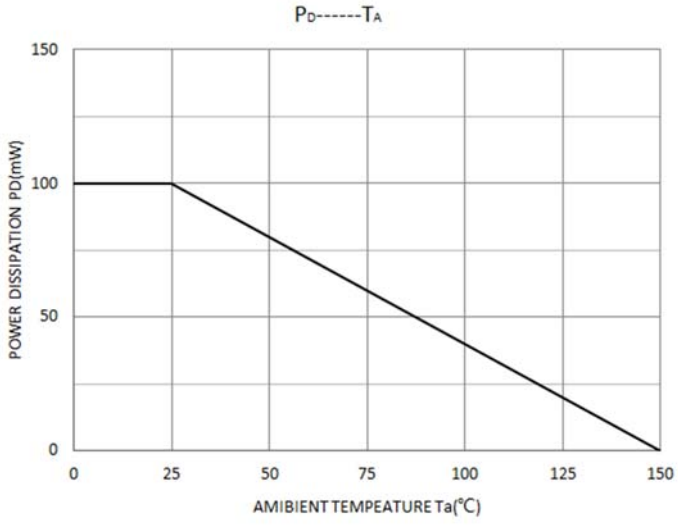
V_{CEsat} —— I_C



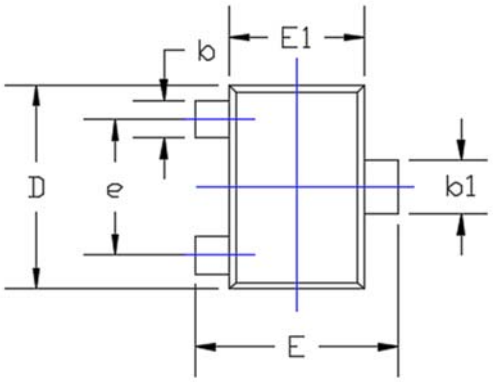
C_O —— V_R



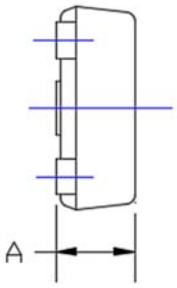
P_D------T_A



■ Outline Dimensions

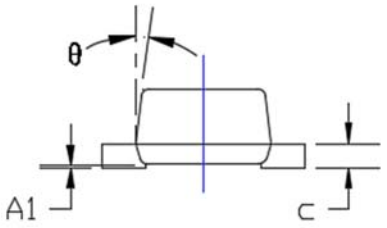


TOP VIEW



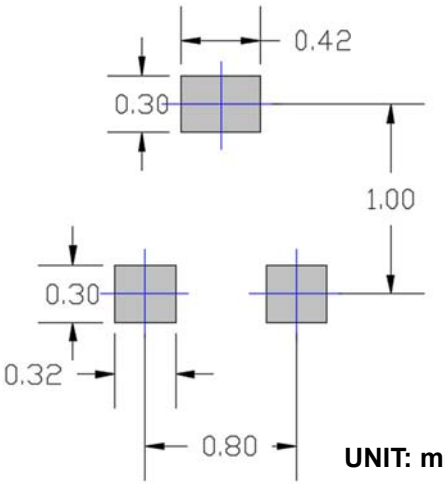
SIDE VIEW

DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.017	0.022	0.430	0.550
A1	0.000	0.002	0.000	0.050
b	0.007	0.011	0.170	0.270
b1	0.011	0.015	0.270	0.370
c	0.003	0.008	0.080	0.200
D	0.045	0.049	1.150	1.250
E	0.045	0.049	1.150	1.250
E1	0.030	0.033	0.750	0.850
e	0.031TYP.		0.800TYP.	
θ	7°REF.		7°REF.	



SIDE VIEW

■ Suggested Pad Layout



UNIT: mm

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