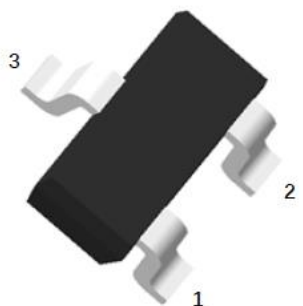
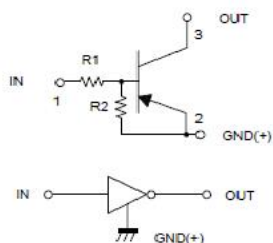


PNP Digital Transistors (Built-in Resistors)



1: IN
2: GND
3: OUT



Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic Insert ion

Application

- Signal amplification
- Switching circuit

Mechanical data

- **Package:** SOT-523
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				19
Supply voltage	V _{CC}	V		-50
Input voltage	V _{IN}	V		-40 to +10
Output current	I _O	mA		-100
Power dissipation	P _D	mW		150
Operation junction temperature	T _J	°C		-55 to +150
Storage temperature	T _{STG}	°C		-55 to +150



DTA115EE

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Input voltage	V _{I(off)}	V	V _{CC} =-5V, I _O =-100μA	-0.5		
Collector-emitter breakdown voltage	V _{I(on)}	V	V _O =-0.3V, I _O =-1mA			-3.0
Output voltage	V _{O(on)}	V	I _O / I _I = -5mA/-0.25 mA			-0.3
Input current	I _I	mA	V _I =-5V			-0.15
Output current	I _{O(off)}	μA	V _{CC} =-50V, V _I =0			-0.5
DC current gain	G ₁		V _O =-5V, I _O = -5mA	82		
Input resistance	R ₁	kΩ		70	100	130
Resistance ratio	R ₂ /R ₁			0.8	1.0	1.2
Transition frequency	f _T	MHz	V _O =-10V, I _O =-5mA		250	

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	833
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	666

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
DTA115EE	F2	Approximate 0.0027	3000	30000	120000	7" reel



■ Characteristic(Typical)

Fig. 1 - DC Current Gain Characteristics

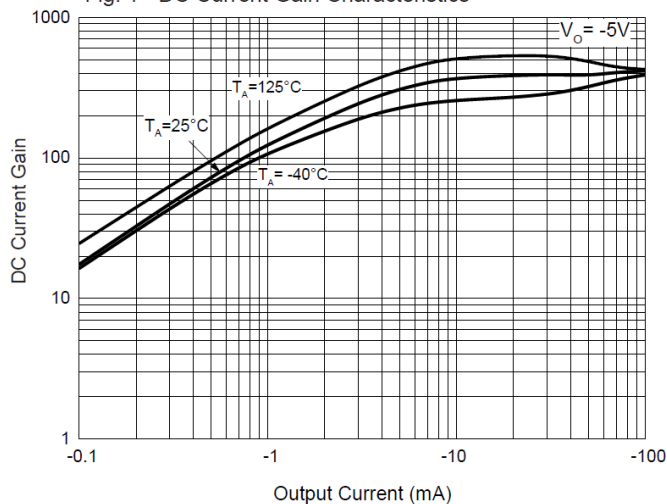


Fig. 2 - Input Voltage (on) Characteristics

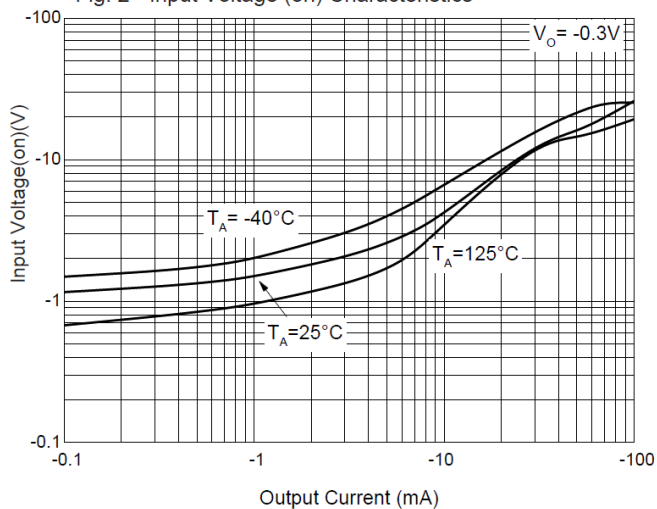


Fig. 3 - Input Voltage (off) Characteristics

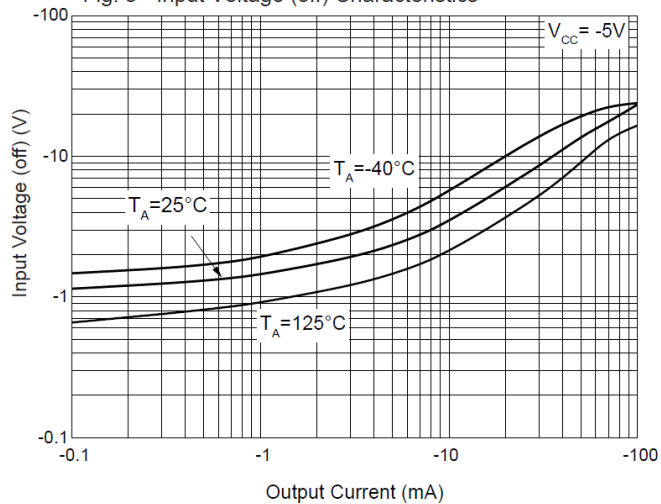


Fig. 4 - Output Voltage Characteristics

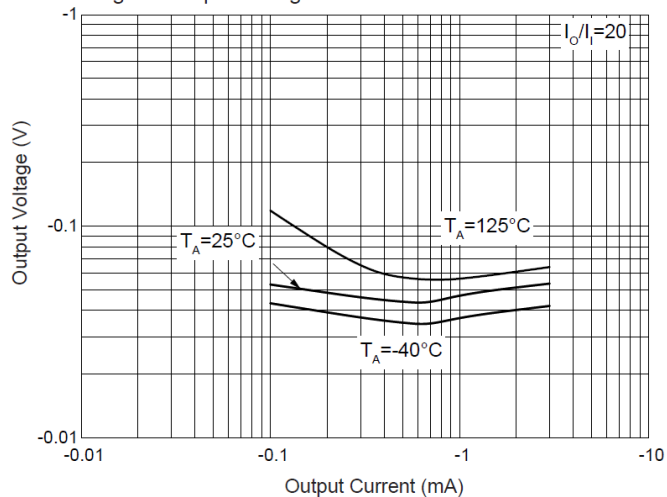
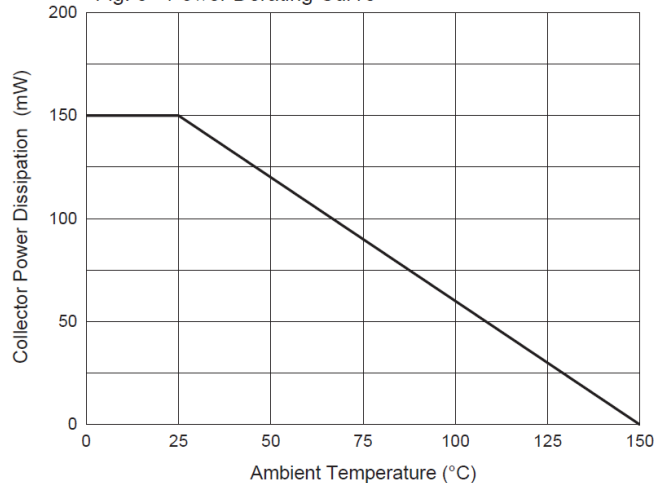


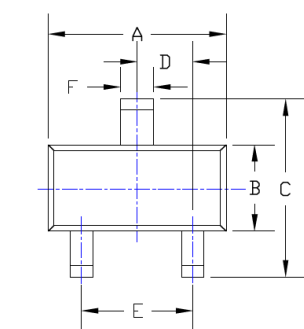
Fig. 5 - Power Derating Curve



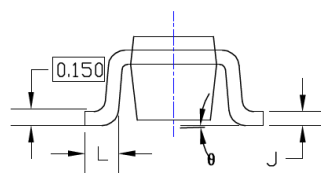


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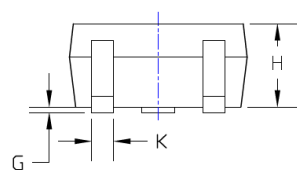
■ Outline Dimensions



TOP VIEW



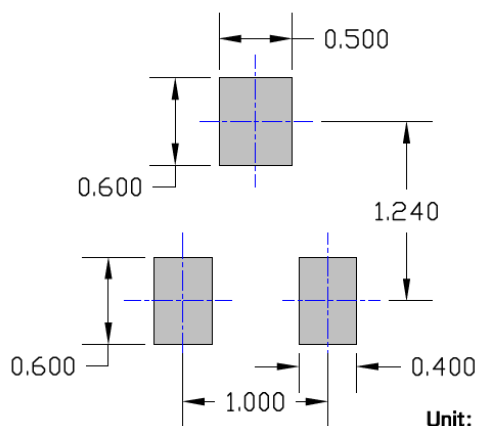
SIDE VIEW



SIDE VIEW

SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.059	0.067	1.500	1.700
B	0.030	0.033	0.750	0.850
C	0.057	0.069	1.450	1.750
D	0.020TYP		0.500TYP	
E	0.035	0.043	0.900	1.100
F	0.010	0.018	0.250	0.450
G	0.000	0.004	0.000	0.100
H	0.024	0.031	0.600	0.800
J	0.004	0.008	0.100	0.200
K	0.006	0.014	0.150	0.350
L	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

■ Suggested Pad Layout



Unit: mm

UNIT: mm



DTA115EE

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