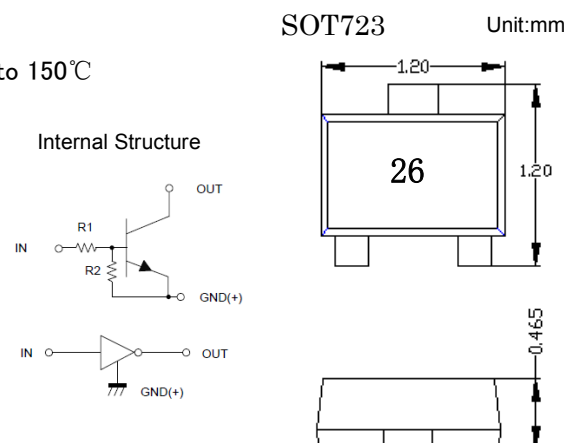


- ◇ Epitaxial planar die construction
- ◇ Operating and Storage Junction Temperatures: -55°C to 150°C
- ◇ Built-In Biasing Resistors
- ◇ RoHS compliant / Green EMC
- ◇ Device Marking Code



Maximum Ratings ($T_a = 25^{\circ}\text{C}$)

Symbol	Parameter	Min	Typ	Max	Unit
V_{CC}	Supply Voltage		50		V
V_{IN}	Input Voltage	-10		40	V
I_C	Collector Current			100	mA
P_D	Power Dissipation		100		mW
T_J	Junction Temperature			150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55		150	$^{\circ}\text{C}$

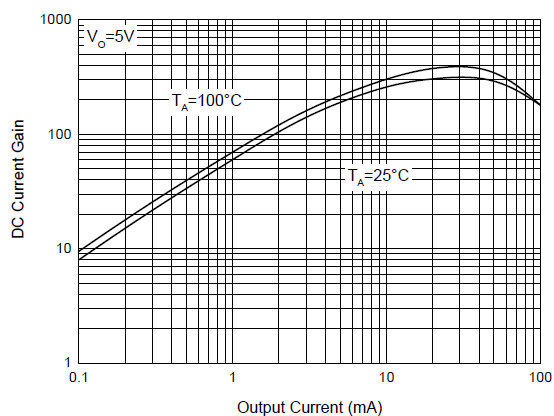
Electrical Characteristics $T_a=25^{\circ}\text{C}$

Symb	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{I(off)}$	Input Voltage	$V_{CC}=5V, I_O=100\mu A$	0.5			V
$V_{I(on)}$		$V_O=0.3V, I_O=2mA$			3.0	V
$V_{O(on)}$	Output Voltage	$I_O=10mA, I_I=0.5mA$			0.3	V
I_I	Input Current	$V_I=5V$			0.18	mA
$I_{O(off)}$	Output Current	$V_{CC}=50V, V_I=0$			0.5	μA
G_1	DC Current Gain	$V_O=5V, I_O=5mA$	68			
R_1	Input Resistance		32.9	47	61.1	$K\Omega$
R_2/R_1	Resistance Ratio		0.8	1.0	1.2	
f_T	Transition Frequency	$V_{CE}=10V, I_E=-5mA, f=100MHz$		250		MHz

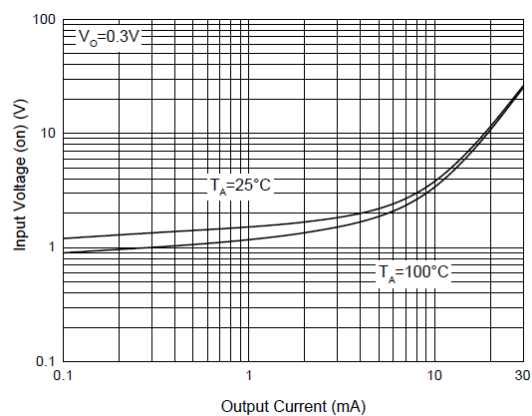
Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
DTC144EM	SOT723	Tape & Reel 8000pcs / 7" Reel	8mm	4mm	Conductive	

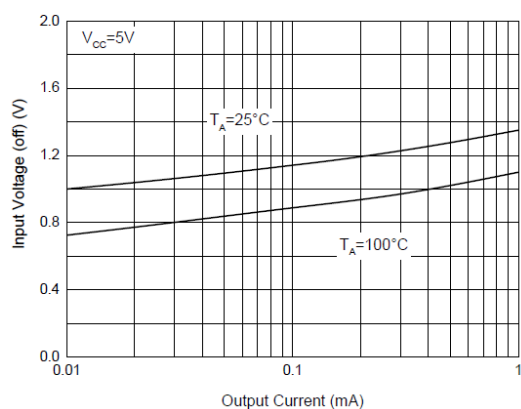
Typical Characteristics



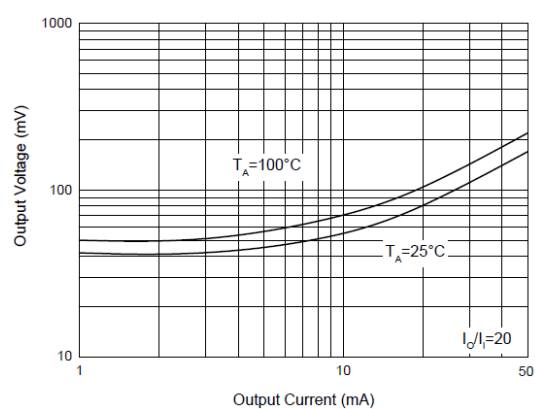
DC Current Gain Characteristics



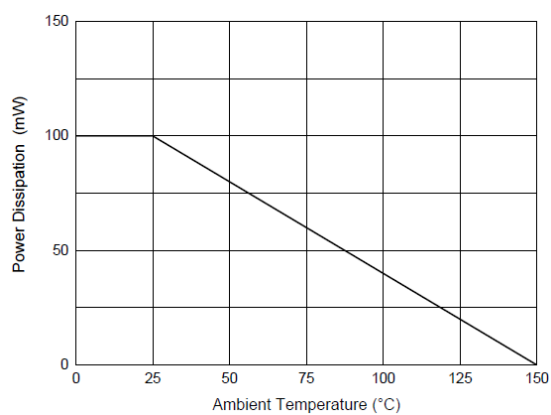
Input Voltage (on) Characteristics



Input Voltage (off) Characteristics



Output Voltage Characteristics

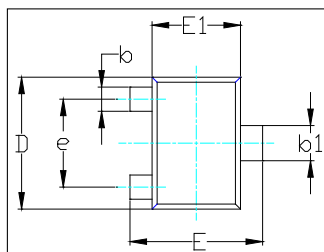


Power Derating Curve

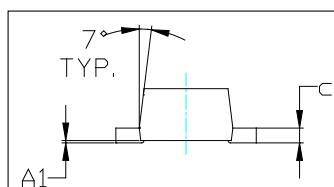
Package Dimensions

Package outline : SOT723

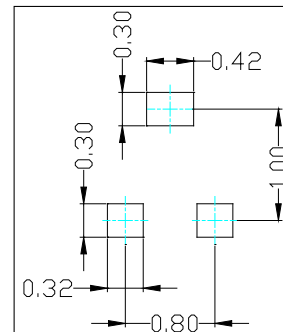
Top view



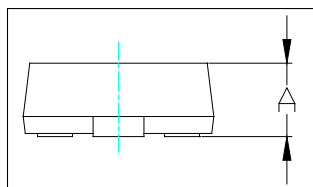
Side view



Soldering Pattern



Front view



Notice:

1. Lead plating: Pb free solder
2. Lead thickness includes solder plating
3. Lead frame: CAC-5
4. Other Tolerance: ± 0.05
5. Dimensions are exclusive of Burrs, Mold Flash and Tie Bar extrusions
6. Unit: mm

SYMBOL	DIMENSIONS IN MILLIMETER	
	MIN	MAX
A	0.430	0.500
A1	0.000	0.050
b	0.170	0.270
b1	0.270	0.370
c	0.080	0.150
D	1.150	1.250
E	1.150	1.250
E1	0.750	0.850
e	0.800 TYP.	
θ	0°	7°