

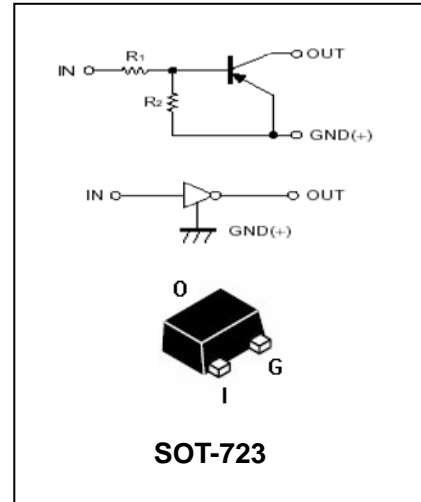
Digital Transistor

DTA(R₁=R₂ SERIES)M

FEATURES

- Epitaxial planar die construction.
- Complementary NPN types available(DTC).
- Built-in biasing resistors,R₁=R₂.
- Also available in lead free version.

HF



APPLICATIONS

- The PNP style digital transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
DTA114EM	14	SOT-723
DTA124EM	15	SOT-723
DTA143EM	13	SOT-723
DTA144EM	16	SOT-723

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units	
V _{CC}	Supply Voltage	-50	V	
V _{IN}	Input Voltage	DTA114EM DTA124EM DTA143EM DTA144EM	+10 to -40 +10 to -40 +10 to -30 +10 to -40	V
I _o	Output Current	DTA114EM DTA124EM DTA143EM DTA144EM	-50 -30 -100 -30	mA
I _c (Max.)	Output current	ALL	-100	mA
P _D	Power Dissipation		100	mW
R _{θJA}	Thermal Resistance, Junction to Ambient Air		1250	°C/W
T _j ,T _{stg}	Operating and Storage and Temperature Range		-55 to +150	°C

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	V _{I(off)}	V _{CC} =-5V, I _O =-100μA	-0.5	-1.1	-	V
Input Voltage	V _{I(on)}	DTA114EM DTA124EM DTA143EM DTA144EM	-	-1.9	-3	
		V _O =-0.3V, I _O =-10mA				
		V _O =-0.2V, I _O =-5mA				
		V _O =-0.3V, I _O =-20mA				
	V _O =-0.3V, I _O =-2mA					
Output Voltage	V _{O(on)}	I _O /I _I =-10mA/-0.5mA,	-	-0.1	-0.3	V
Input Current	I _I	V _I =-5V	-	-	-0.88 -0.36 -1.8 -0.18	mA
Output Current	I _{O(off)}	V _{CC} =-50V, V _I =0V	-	-	-0.5	μA
DC Current Gain	G _I	DTA114EM DTA124EM DTA143EM DTA144EM	-	-	-	
		V _O =-5V, I _O =-5mA				
		V _O =-5V, I _O =-5mA				
		V _O =-5V, I _O =-10mA				
	V _O =-5V, I _O =-5mA					
Input Resistor	R ₁ (R ₂)	DTA114EM DTA124EM DTA143EM DTA144EM				kΩ
		7				
		15.4				
		3.29				
	32.9					
Resistance Ratio	R ₂ /R ₁	-	0.8	1	1.2	
Gain-Bandwidth Product	f _T	V _{CE} =-10V, I _E =5mA, f=100MHz	-	250	-	MHz

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

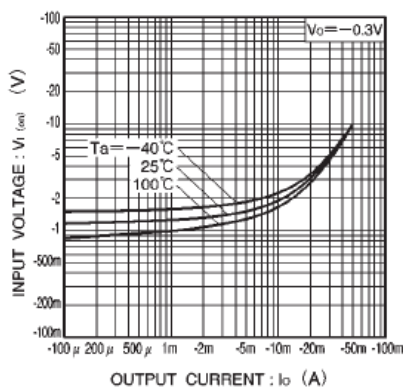


Fig.1 Input voltage vs. output current (ON characteristics)

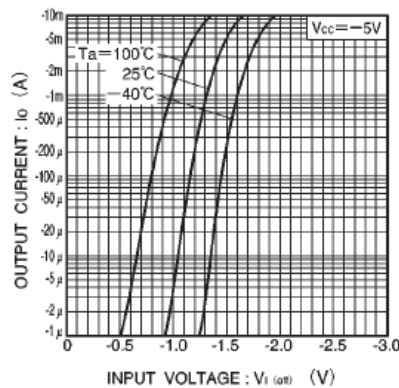


Fig.2 Output current vs. input voltage (OFF characteristics)

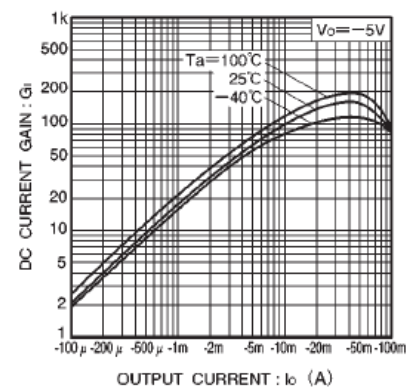


Fig.3 DC current gain vs. output current

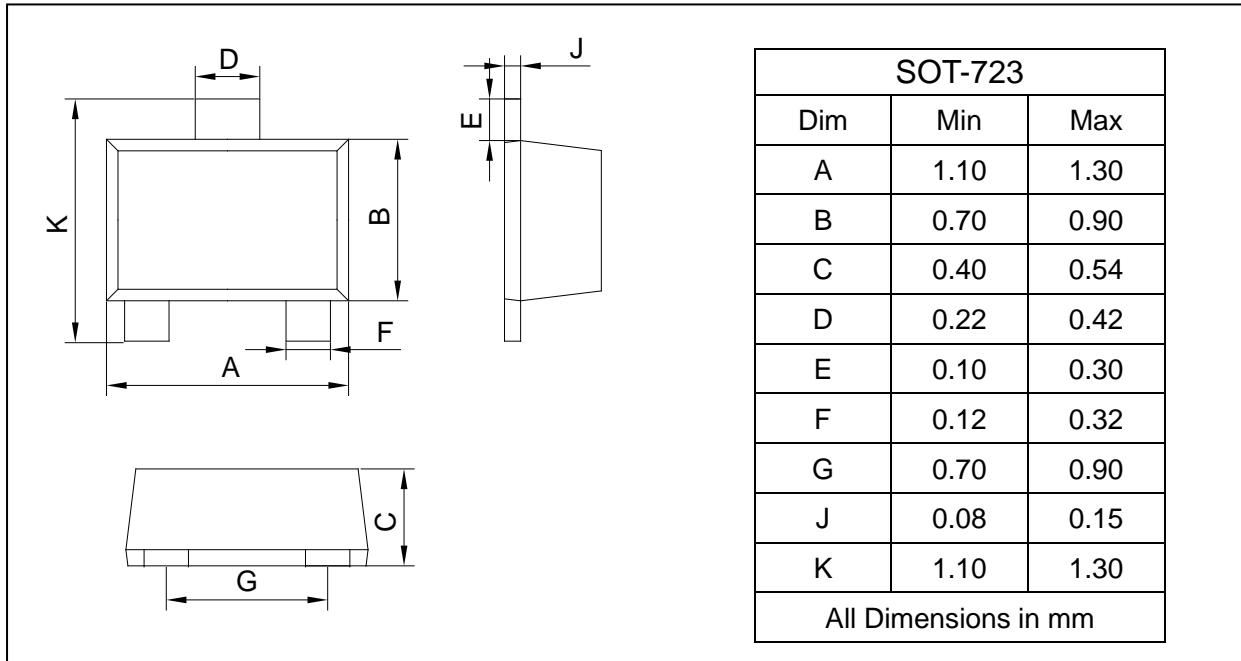
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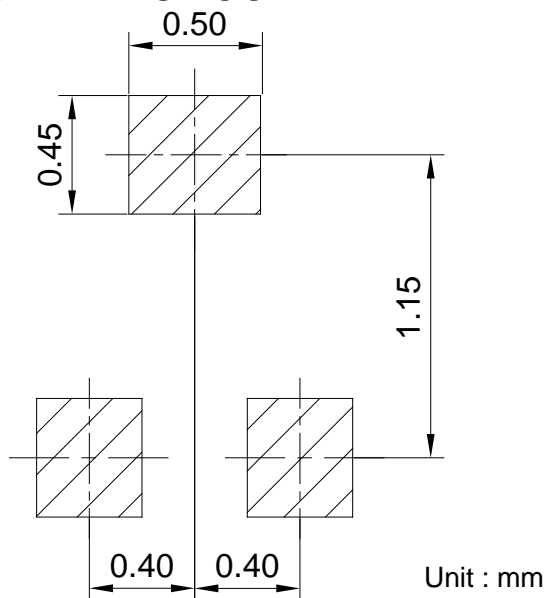
PACKAGE OUTLINE

Plastic surface mounted package

SOT-723



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
DTA114EM/124EM/143EM/144EM	SOT-723	10000pcs / Tape & Reel