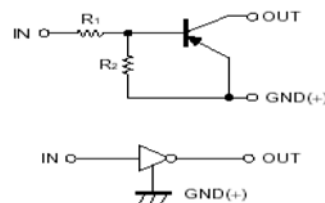


Digital Transistor

DTA(R₁=R₂ SERIES)E

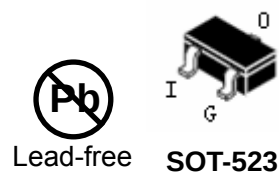
FEATURES

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



APPLICATIONS

- The PNP style digital transistor.



ORDERING INFORMATION

Type No.	Marking	Package Code
DTA114EE	14	SOT-523
DTA124EE	15	SOT-523
DTA143EE	13	SOT-523
DTA144EE	16	SOT-523

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{CC}	Supply Voltage	-50	V
V _{IN}	Input Voltage DTA114EE DTA124EE DTA143EE DTA144EE	+10 to -40 +10 to -40 +10 to -30 +10 to -40	V
I _O	Output Current DTA114EE DTA124EE DTA143EE DTA144EE	-50 -30 -100 -30	mA
I _C (Max.)	Output current ALL	-100	mA
P _D	Power Dissipation	150	mW
R _{θJA}	Thermal Resistance, Junction to Ambient Air	833	°C/W
T _j , T _{stg}	Operating and Storage and Temperature Range	-55 to +150	°C

Digital Transistor

DTA(R₁=R₂ SERIES)E

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	$V_{CC}=-5V, I_O=-100\mu A$	-0.5	-1.1	-	V
Input Voltage	$V_{I(on)}$	$V_O=-0.3V, I_O=-10mA$ $V_O=-0.2V, I_O=-5mA$ $V_O=-0.3V, I_O=-20mA$ $V_O=-0.3V, I_O=-2mA$	-	-1.9	-3	
Output Voltage	$V_{O(on)}$	$I_O/I_I=-10mA/-0.5mA,$	-	-0.1	-0.3	
Output Voltage	$V_{O(on)}$	$I_O/I_I=-10mA/-0.5mA,$	-	-0.1	-0.3	
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	$V_O=-5V, I_O=-5mA$ $V_O=-5V, I_O=-5mA$ $V_O=-5V, I_O=-10mA$ $V_O=-5V, I_O=-5mA$	30 56 20 68	-	-	
Input Resistor	$R_1(R_2)$		7 15.4 3.29 32.9	10 22 4.7 47	13 28.6 6.11 61.1	k Ω
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

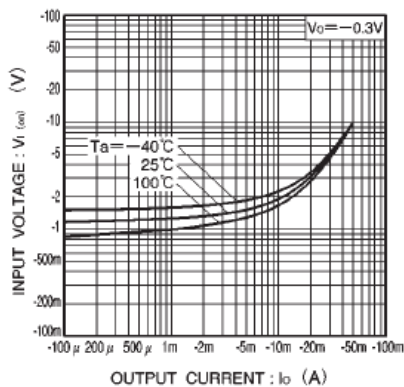


Fig.1 Input voltage vs. output current (ON characteristics)

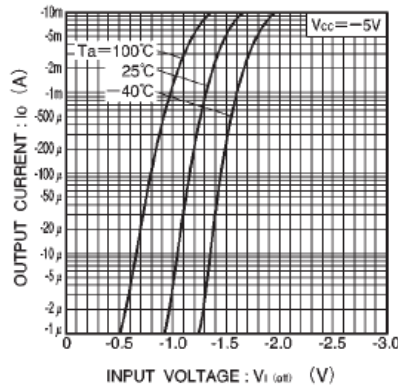


Fig.2 Output current vs. input voltage (OFF characteristics)

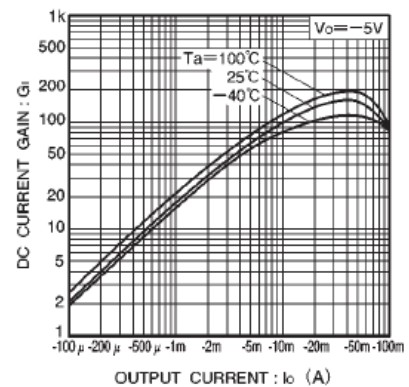


Fig.3 DC current gain vs. output current

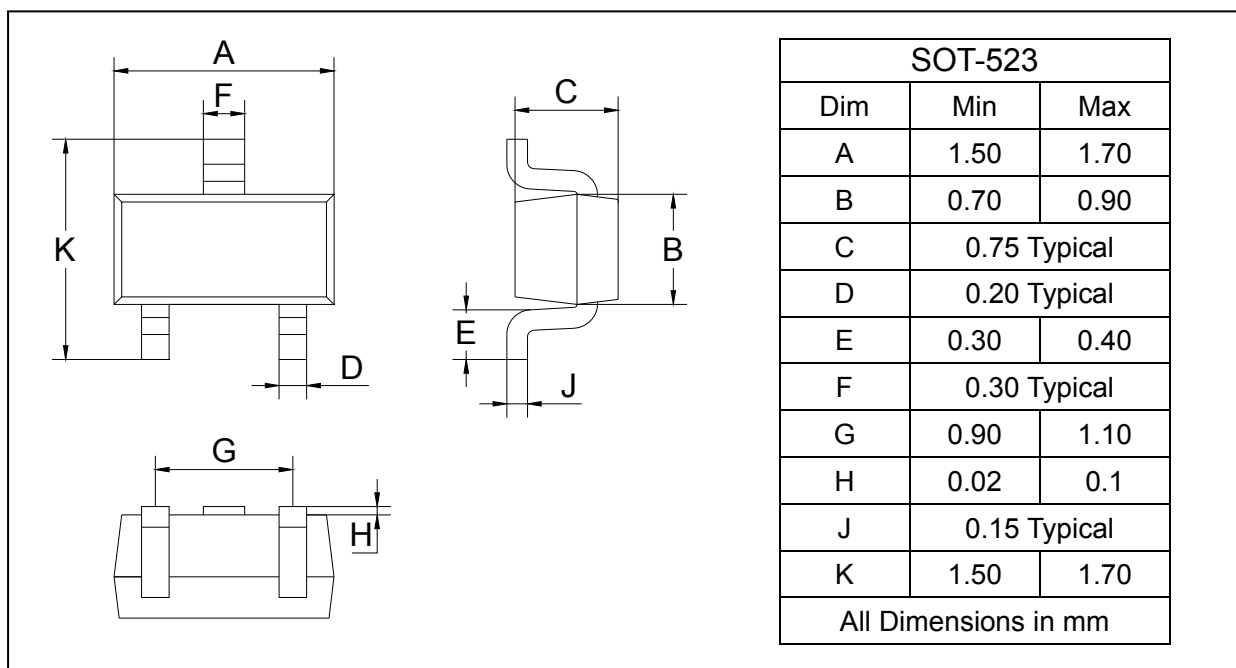
Digital Transistor

DTA(R₁=R₂ SERIES)E

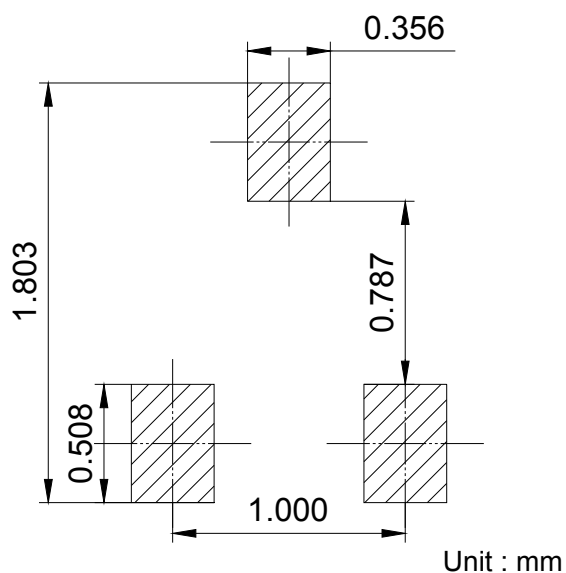
PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
DTA114EE/124EE/143EE/144EE	SOT-523	3000/Tape&Reel