

Micro Commercial Components



Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

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DTC113ZCA

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epitaxial Planar Die Construction
- Complementary NPN Types Available
- Built-In Biasing Resistors
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Marking: E21

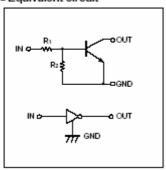
Absolute maximum ratings @ 25°

Symbol	Parameter	Min	Тур	Max	Unit
Ic	Collector current		100		mA
V _{IN}	Input voltage	-5		+10	V
P _d	Power dissipation		200		mW
Tj	Junction temperature		150		$^{\circ}$
T _{sta}	Storage temperature	-55		150	$^{\circ}$

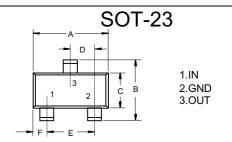
Electrical Characteristics @ 25°C

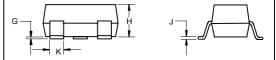
Symbol	Parameter		Тур	Max	Unit
$V_{I(off)}$	Input voltage (V _{CC} =5V, I _O =100 μ A)			0.3	V
$V_{I(on)}$	$(V_0=0.3V, I_0=20mA)$	3.0			V
$V_{O(on)}$	Output voltage (I _O =10mA,I _i =0.5mA)			0.3	V
I _I	Input current (V _I =5V)			7.2	mA
$I_{O(off)}$	Output current (V _{CC} =50V, V _I =0)			0.5	μА
Gı	DC current gain (V ₀ =5V, I ₀ =5mA)	33			
R ₁	Input resistance	0.7	1.0	1.3	$\mathbf{K}\Omega$
R ₂ /R ₁	Resistance ratio	8	10	12	
f⊤	Transition frequency $(V_{CE}=10V, I_{E}=5mA, f=100MHz)$		250		MHz

Equivalent circuit



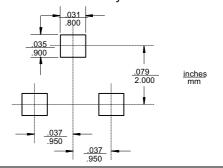
Digital Transistors





DIMENSIONS						
	INCH	ES	MM			
DIM	MIN	MAX	MIN	MAX	NOTE	
Α	.110	.120	2.80	3.04		
В	.083	.104	2.10	2.64		
C	.047	.055	1.20	1.40		
D	.035	.041	.89	1.03		
Е	.070	.081	1.78	2.05		
F	.018	.024	.45	.60		
O	.0005	.0039	.013	.100		
I	.035	.044	.89	1.12		
J	.003	.007	.085	.180		
Κ	.015	.020	.37	.51		

Suggested Solder Pad Layout



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Typical Characteristics

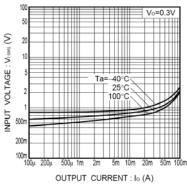


Fig.1 Input voltage vs. output current (ON characteristics)

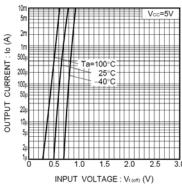


Fig.2 Output current vs. input voltage (OFF characteristics)

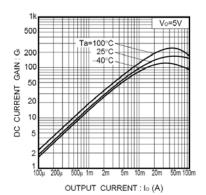


Fig.3 DC current gain vs. output current

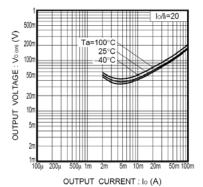


Fig.4 Output voltage vs. output current



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Ordering Information:

Device	Packing
Part Number-TP	Tape&Reel 3Kpcs/Reel

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