

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Both the DTA143Z Chip and DTC143Z Chip in a Package
- Mounting Possible with SOT-563 Automatic Mounting Machines
- Transistor Elements are Independent, Eliminating Interference
- Mounting Cost and Area Be Cut in Half

MARKING

D22

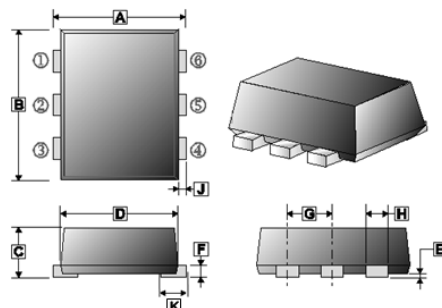
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-563	3K	7 inch

ORDER INFORMATION

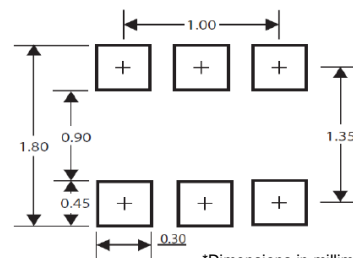
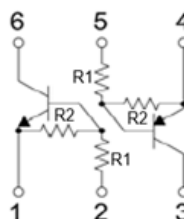
Part Number	Type
EMD22-C	Lead (Pb)-free and Halogen-free

SOT-563



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.50	1.70	F	0.09	0.16
B	1.50	1.70	G	0.45	0.55
C	0.525	0.60	H	0.17	0.27
D	1.10	1.30	J	0.10	0.30
E	-	0.05	K	0.20	0.40

Mounting Pad Layout



*Dimensions in millimeters

ABSOLUTE MAXIMUM RATINGS (NPN) ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	-5~30	
Output Current	I_O	100	mA
	I_C	100	
Power Dissipation	P_D	150	mW
Junction & Storage Temperature Range	T_J, T_{STG}	-55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (NPN) ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Input Voltage	$V_{I(off)}$	0.5	-	-	V	$V_{CC}=5V, I_O=100\mu A$
	$V_{I(on)}$	-	-	1.3		$V_O=0.3V, I_O=5mA$
Output Voltage	$V_{O(on)}$	-	-	0.3		$I_O=5mA, I_I=0.25mA$
Input Current	I_I	-	-	1.8	mA	$V_I=5V$
Output Current	$I_{O(off)}$	-	-	0.5	μA	$V_{CC}=50V, V_I=0$
DC Current Gain	G_I	80	-	-	V	$V_O=5V, I_O=10mA$
Input Resistance	R_1	3.29	-	6.11	k Ω	
Resistance Ratio	R_2/R_1	8	-	12		
Transition Frequency	f_T	-	250	-	MHz	$V_O=10V, I_O=5mA, f=100MHz$

ABSOLUTE MAXIMUM RATINGS (PNP) ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-30~5	
Output Current	I_O	-100	mA
	I_C	-100	
Power Dissipation	P_D	150	mW
Junction & Storage Temperature Range	T_J, T_{STG}	-55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (PNP) ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Input Voltage	$V_{I(off)}$	-0.5	-	-	V	$V_{CC} = -5V, I_O = -100\mu\text{A}$
	$V_{I(on)}$	-	-	-1.3		$V_O = -0.3V, I_O = -5\text{mA}$
Output Voltage	$V_{O(on)}$	-	-	-0.3		$I_O = -5\text{mA}, I_I = -0.25\text{mA}$
Input Current	I_I	-	-	-1.8	mA	$V_I = -5V$
Output Current	$I_{O(off)}$	-	-	-0.5	μA	$V_{CC} = -50V, V_I = 0$
DC Current Gain	G_I	80	-	-	V	$V_O = -5V, I_O = -10\text{mA}$
Input Resistance	R_1	3.29	-	6.11	k Ω	
Resistance Ratio	R_2/R_1	8	-	12		
Transition Frequency	f_T	-	250	-	MHz	$V_O = -10V, I_O = -5\text{mA}, f = 100\text{MHz}$