

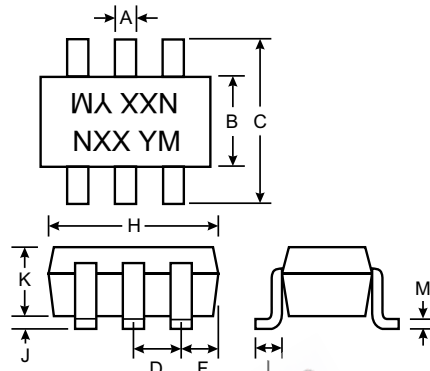
Features

- Epitaxial Planar Die Construction
- Complementary PNP Types Available (DDA)
- Built-In Biasing Resistors

Mechanical Data

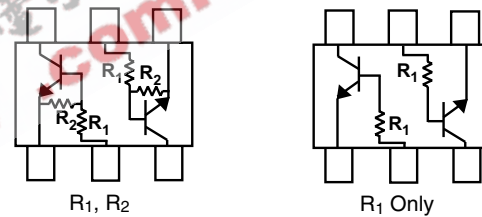
- Case: SOT-363, Molded Plastic
- Case material - UL Flammability Rating 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Weight: 0.006 grams (approx.)

UNDER DEVELOPMENT



SOT-363		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
E	0.30	0.40
G	1.80	2.20
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
All Dimensions in mm		

P/N	R1	R2	MARKING
DDC124EU	22K	22K	N17
DDC144EU	47K	47K	N20
DDC114YU	10K	47K	N14
DDC123JU	2.2K	47K	N06
DDC114EU	10K	10K	N13
DDC143TU	4.7K	-	N07
DDC114TU	10K	-	N12



SCHMATIC DIAGRAM

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Supply Voltage, (3) to (1)	V_{CC}	50	V
Input Voltage, (2) to (1)	V_{IN}	-10 to +40 -10 to +40 -6 to +40 -5 to +12 -10 to +40 -5 V_{max} -5 V_{max}	V
Output Current	I_o	30 30 70 100 50 100 100	mA
Output Current	I_c (Max)	100	mA
Power Dissipation	P_d	200	mW
Operating and Storage and Temperature Range	T_j, T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic (DDC143TU & DDC114TU only)	Symbol	Min	Typ	Max	Unit	Test Condition	
Collector-Base Breakdown Voltage	BV _{CBO}	50	—	—	V	I _C = 50μA	
Collector-Emitter Breakdown Voltage	BV _{CEO}	50	—	—	V	I _C = 1mA	
Emitter-Base Breakdown Voltage	BV _{EBO}	5	—	—	V	I _E = 50μA	
Collector Cutoff Current	I _{CBO}	—	—	0.5	μA	V _{CB} = 50V	
Emitter Cutoff Current	I _{EBO}	—	—	0.5	μA	V _{EB} = 4V	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	—	—	0.3	V	I _C /I _B = 2.5mA / 0.25mA I _C /I _B = 1mA / 0.1mA	DDC143TU DDC114TU
DC Current Transfer Ratio	h _{FE}	100	250	600	—	I _C = 1mA, V _{CE} = 5V	
Gain-Bandwidth Product*	f _T	—	250	—	MHz	V _{CE} = 10V, I _E = -5mA, f = 100MHz	

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Input Voltage	V _{I(off)}	0.5	1.1	—	V	V _{CC} = 5V, I _O = 100μA
		0.5	1.1	—		
Input Voltage	V _{I(on)}	0.3	—	—	V	V _O = 0.3, I _O = 5mA V _O = 0.3, I _O = 2mA V _O = 0.3, I _O = 1mA V _O = 0.3, I _O = 5mA V _O = 0.3, I _O = 10mA
		0.5	1.1	—		
Output Voltage	V _{O(on)}	—	0.1	0.3	V	I _O /I _I = 10mA / 0.5mA I _O /I _I = 10mA / 0.5mA I _O /I _I = 5mA / 0.25mA I _O /I _I = 5mA / 0.25mA I _O /I _I = 10mA / 0.5mA
		—	0.1	0.3		
Input Current	I _I	—	—	0.36 0.18 0.88 3.6 0.88	mA	V _I = 5V
Output Current	I _{O(off)}	—	—	0.5	μA	V _{CC} = 50V, V _I = 0V
DC Current Gain	G _I	56 68 68 80 30	—	—	—	V _O = 5V, I _O = 5mA V _O = 5V, I _O = 5mA V _O = 5V, I _O = 10mA V _O = 5V, I _O = 10mA V _O = 5V, I _O = 5mA
Gain-Bandwidth Product*	f _T	—	250	—	MHz	V _{CE} = 10V, I _E = 5mA, f = 100MHz

* Transistor - For Reference Only

UNDER DEVELOPMENT