

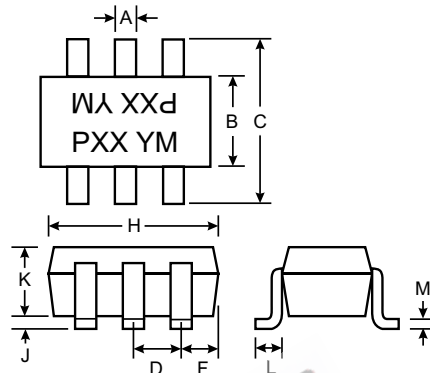
Features

- Epitaxial Planar Die Construction
- Complementary NPN Types Available (DDC)
- Built-In Biasing Resistors

Mechanical Data

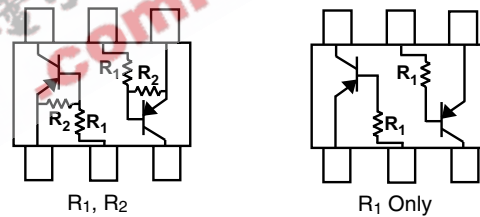
- Case: SOT-363, Molded Plastic
- Case material - UL Flammability Rating 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Weight: 0.006 grams (approx.)

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
DDA124EU	22K	22K	P17
DDA144EU	47K	47K	P20
DDA114YU	10K	47K	P14
DDA123JU	2.2K	47K	P06
DDA114EU	10K	10K	P13
DDA143TU	4.7K	-	P07
DDA114TU	10K	-	P12



SCHEMATIC DIAGRAM

Maximum Ratings @ T_A = 25°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	°C

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic (DDA143TU & DDA114TU only)	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	BV_{CBO}	-50	—	—	V	$I_C = -50\mu\text{A}$
Collector-Emitter Breakdown Voltage	BV_{CEO}	-50	—	—	V	$I_C = -1\text{mA}$
Emitter-Base Breakdown Voltage	BV_{EBO}	-5	—	—	V	$I_E = -50\mu\text{A}$
Collector Cutoff Current	I_{CBO}	—	—	-0.5	μA	$V_{CB} = -50\text{V}$
Emitter Cutoff Current	I_{EBO}	—	—	-0.5	μA	$V_{EB} = -4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	—	—	-0.3	V	$I_C/I_B = -2.5\text{mA} / -0.25\text{mA}$ DDA143TU $I_C/I_B = -1\text{mA} / -0.1\text{mA}$ DDA114TU
DC Current Transfer Ratio	h_{FE}	100	250	600	—	$I_C = -1\text{mA}$, $V_{CE} = -5\text{V}$
Gain-Bandwidth Product*	f_T	—	250	—	MHz	$V_{CE} = -10\text{V}$, $I_E = 5\text{mA}$, $f = 100\text{MHz}$

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition	
Input Voltage	$V_{I(off)}$	DDA124EU	-0.5	-1.1	—	V	$V_{CC} = -5\text{V}$, $I_O = -100\mu\text{A}$
		DDA144EU	-0.5	-1.1	—		
Input Voltage	$V_{I(on)}$	DDA114YU	-0.3	—	—	V	$V_O = -0.3$, $I_O = -5\text{mA}$
		DDA123JU	-0.5	—	—		
Input Voltage	$V_{I(on)}$	DDA114EU	-0.5	-1.1	—	V	$V_O = -0.3$, $I_O = -2\text{mA}$
		DDA124EU	—	-1.9	-3.0		
Output Voltage	$V_{O(on)}$	DDA144EU	—	-1.9	-3.0	V	$V_O = -0.3$, $I_O = -1\text{mA}$
		DDA114YU	—	—	-1.4		
Output Voltage	$V_{O(on)}$	DDA123JU	—	—	-1.1	V	$V_O = -0.3$, $I_O = -5\text{mA}$
		DDA114EU	—	-1.9	-3.0		
Output Voltage	$V_{O(on)}$	DDA124EU	—	-0.1	-0.3	V	$I_O/I_I = -10\text{mA} / -0.5\text{mA}$
		DDA144EU	—	-0.1	-0.3		
Output Voltage	$V_{O(on)}$	DDA114YU	—	-0.1	-0.3	V	$I_O/I_I = -10\text{mA} / -0.5\text{mA}$
		DDA123JU	—	-0.1	-0.3		
Output Voltage	$V_{O(on)}$	DDA114EU	—	-0.1	-0.3	V	$I_O/I_I = -5\text{mA} / -0.25\text{mA}$
		DDA124EU	—	-0.1	-0.3		
Input Current	I_I	DDA144EU	—	—	-0.36	mA	$V_I = -5\text{V}$
		DDA114YU	—	—	-0.18		
Input Current	I_I	DDA123JU	—	—	-0.88	mA	$V_I = -5\text{V}$
		DDA114EU	—	—	-0.88		
Input Current	I_I	DDA124EU	—	—	-3.6	mA	$V_I = -5\text{V}$
		DDA144EU	—	—	-0.88		
Output Current	$I_{O(off)}$	—	—	-0.5	μA	$V_{CC} = -50\text{V}$, $V_I = -0\text{V}$	
DC Current Gain	G_I	DDA124EU	56	—	—	—	$V_O = -5\text{V}$, $I_O = -5\text{mA}$
		DDA144EU	68	—	—		
DC Current Gain	G_I	DDA114YU	68	—	—	—	$V_O = -5\text{V}$, $I_O = -5\text{mA}$
		DDA123JU	80	—	—		
DC Current Gain	G_I	DDA114EU	30	—	—	—	$V_O = -5\text{V}$, $I_O = -10\text{mA}$
		DDA124EU	30	—	—		
DC Current Gain	G_I	—	—	—	—	$V_O = -5\text{V}$, $I_O = -5\text{mA}$	
Gain-Bandwidth Product*	f_T	—	250	—	MHz	$V_{CE} = -10\text{V}$, $I_E = -5\text{mA}$, $f = 100\text{MHz}$	

* Transistor - For Reference Only

UNDER DEVELOPMENT