DDA (xxxx) U

PNP PRE-BIASED SMALL SIGNAL SOT-363 DUAL SURFACE MOUNT TRANSISTOR

NEW PRODUCT

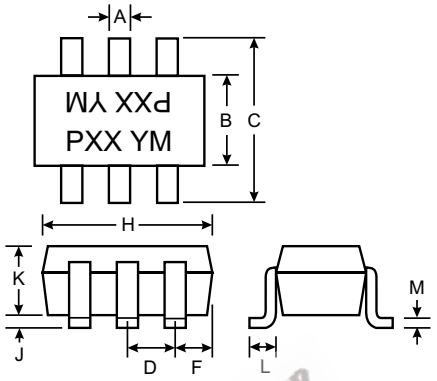
UNDER DEVELOPMENT

Features

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

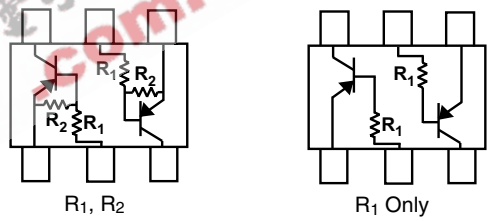
Mechanical Data

- 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.)



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)	DDA124EU DDA144EU DDA114YU DDA123JU DDA114EU DDA143TU DDA114TU	V_{IN}	+10 to -40 +10 to -40 +6 to -40 +5 to -12 +10 to -40 +5 Vmax +5 Vmax	V
Output Current	DDA124EU DDA144EU DDA114YU DDA123JU DDA114EU DDA143TU DDA114TU	I_O	-30 -30 -70 -100 -50 -100 -100	mA
Output Current	All	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

NEW PRODUCT

Electrical Characteristics @ T_A = 25°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 = -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 DDA143TU I_C/I_B = -1mA / -0.1mA DDA114TU
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	DDA124EU DDA144EU DDA114YU DDA123JU DDA114EU	$V_{I(off)}$	-0.5 -0.5 -0.3 -0.5 -0.5	-1.1 -1.1 — — -1.1	—	V	V_{CC} = -5V, I_O = -100μA
	DDA124EU DDA144EU DDA114YU DDA123JU DDA114EU	$V_{I(on)}$	—	-1.9 -1.9 — — -1.9	-3.0 -3.0 -1.4 -1.1 -3.0		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
Output Voltage	DDA124EU DDA144EU DDA114YU DDA123JU DDA114EU	$V_{O(on)}$	—	-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
Input Current	DDA124EU DDA144EU DDA114YU DDA123JU DDA114EU	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	DDA124EU DDA144EU DDA114YU DDA123JU DDA114EU	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