



DUAL TRANSISTOR (NPN+NPN)

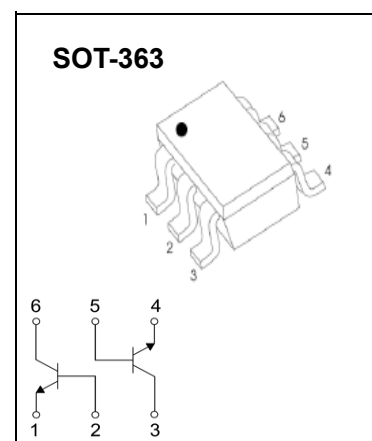
FEATURES

- Epitaxial Planar Die Construction
- Ideal for Low Power Amplification and Switching

MRKING :K2X

Maximum Ratings ($T_a = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.6	A
P_C	Collector Power Dissipation	0.2	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	$^\circ\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55 ~ +150	$^\circ\text{C}$

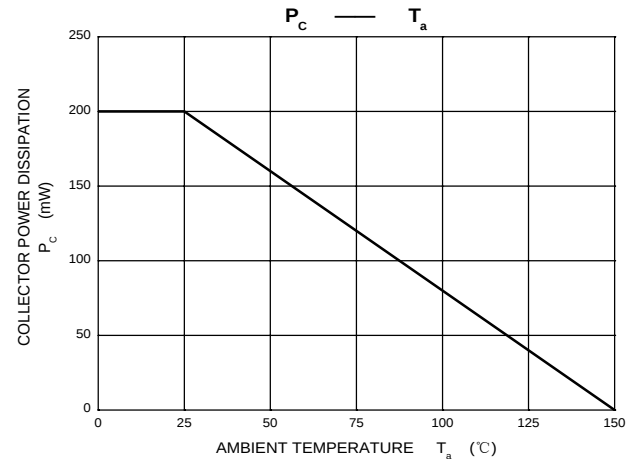
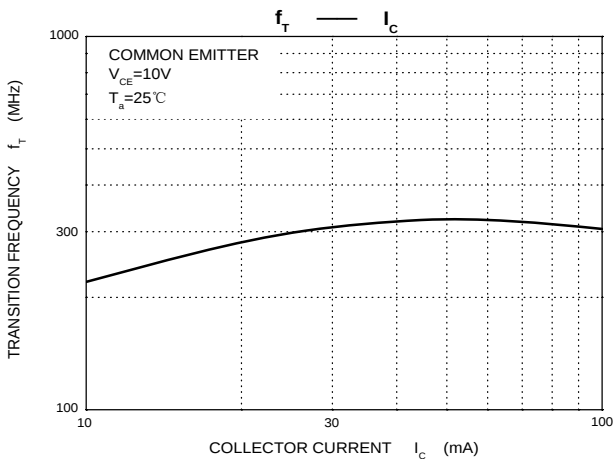
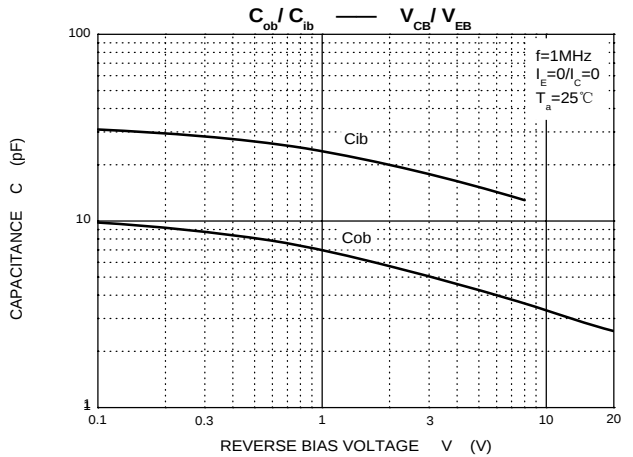
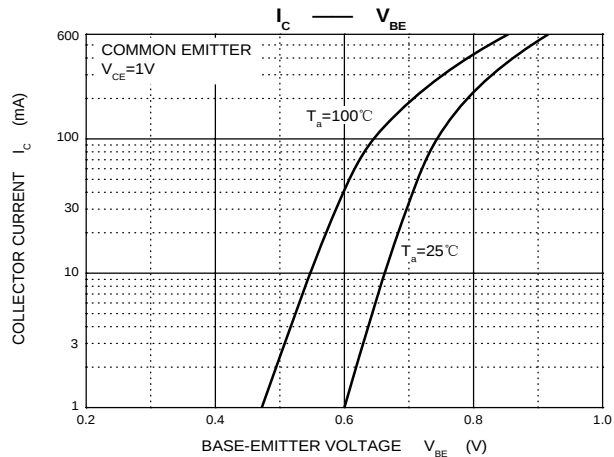
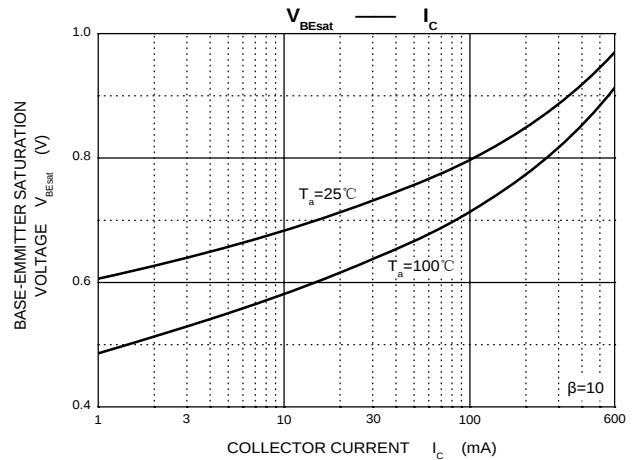
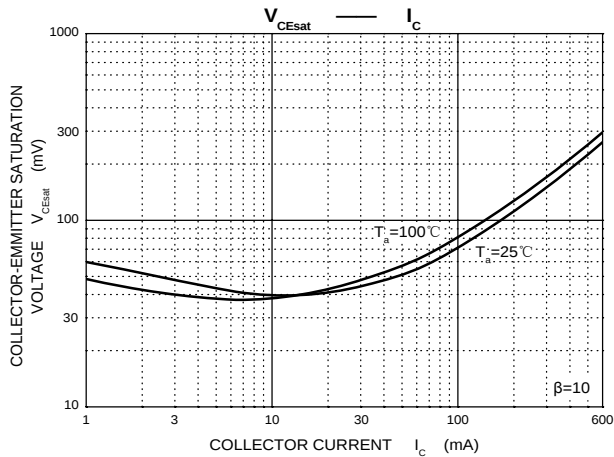
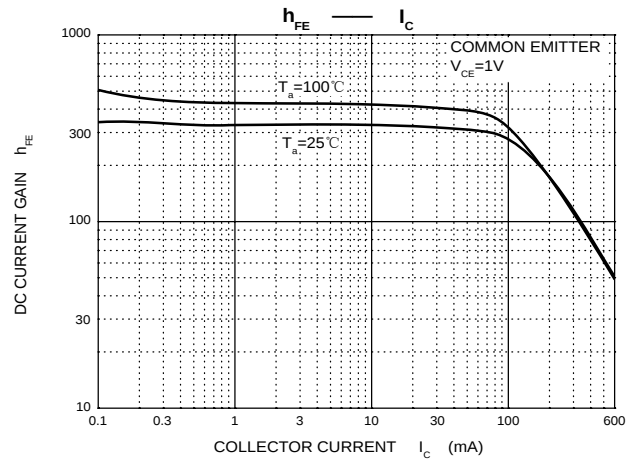
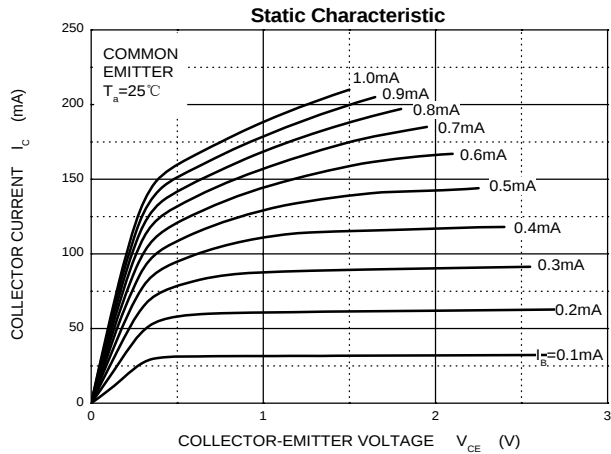


NPN 4401 ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu\text{A}, I_E = 0$	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu\text{A}, I_C = 0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB} = 50\text{V}, I_E = 0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 35\text{V}, I_B = 0$		0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$		0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 1\text{V}, I_C = 0.1\text{mA}$	20		
	$h_{FE(2)}$	$V_{CE} = 1\text{V}, I_C = 1\text{mA}$	40		
	$h_{FE(3)}$	$V_{CE} = 1\text{V}, I_C = 10\text{mA}$	80		
	$h_{FE(4)}$	$V_{CE} = 1\text{V}, I_C = 150\text{mA}$	100	300	
	$h_{FE(5)}$	$V_{CE} = 2\text{V}, I_C = 500\text{mA}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = 150\text{mA}, I_B = 15\text{mA}$		0.4	V
	$V_{CE(sat)2}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$		0.75	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C = 150\text{mA}, I_B = 15\text{mA}$	0.75	0.95	V
	$V_{BE(sat)2}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$		1.2	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 20\text{mA}, f = 100\text{MHz}$	250		MHz
Output capacitance	C_{ob}	$V_{CB} = 5\text{V}, I_E = 0, f = 1\text{MHz}$		6.5	pF
Delay time	t_d	$V_{CC} = 30\text{V}, V_{BE} = 2\text{V}, I_C = 150\text{mA}, I_{B1} = 15\text{mA}$		15	nS
Rise time	t_r			20	nS
Storage time	t_s	$V_{CC} = 30\text{V}, I_C = 150\text{mA}, I_{B1} = -I_{B2} = 15\text{mA}$		225	nS
Fall time	t_f			30	nS

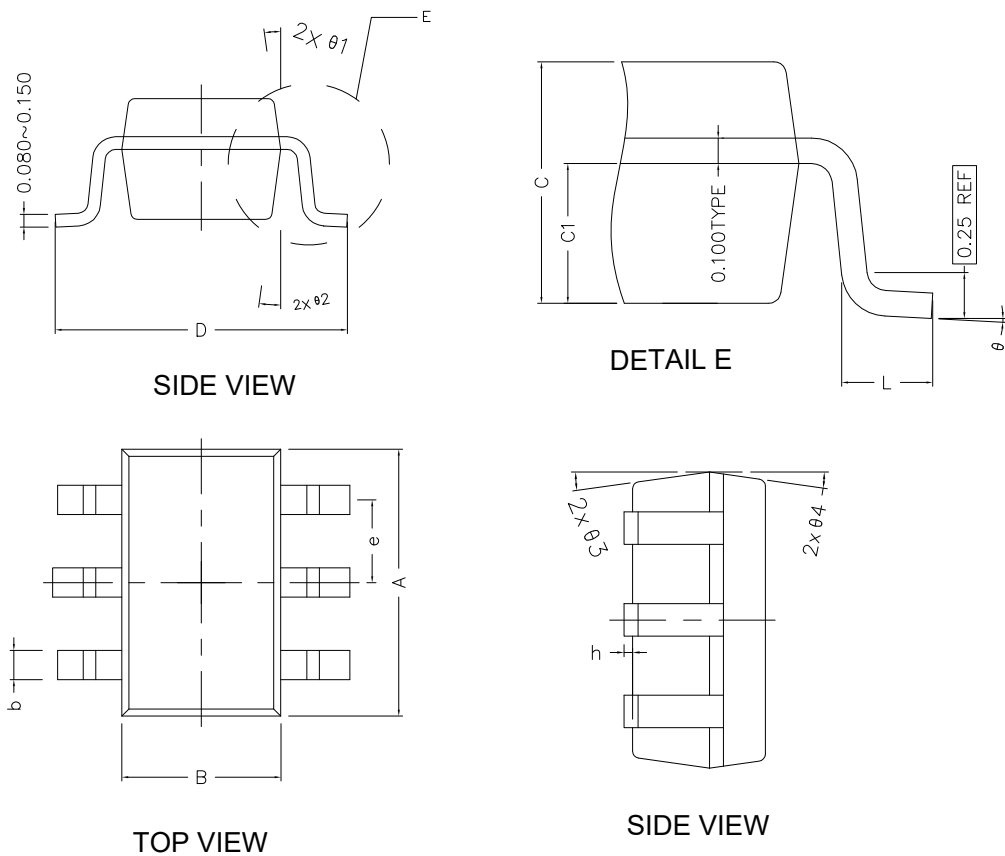


Typical Characteristics



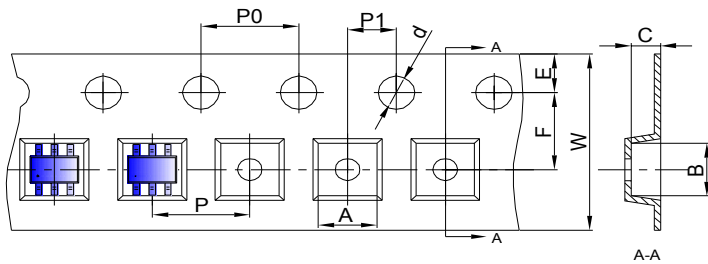


SOT-363 Package Outline Dimensions



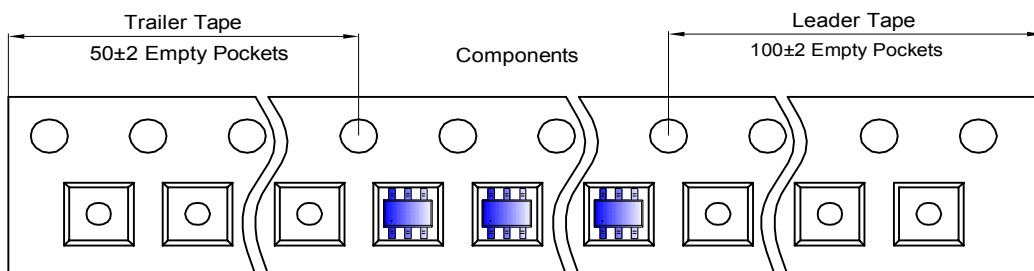
COMMON DIMENSIONS (UNITS OF MEASURE IS mm)			
	MIN	NORMAL	MAX
A	2.000	2.100	2.200
B	1.150	1.250	1.350
C	0.900	0.950	1.000
C1	0.500	0.550	0.600
D	2.100	2.300	2.500
L	0.220	0.360	0.500
b	0.200	0.250	0.400
h	0.020	0.050	0.100
e	0.650 TYPE		
θ_1	8° TYPE		
θ_2	8° TYPE		
θ_3	8° TYPE		
θ_4	8° TYPE		
θ	0~8° TYPE		

SOT-363 Embossed Carrier Tape

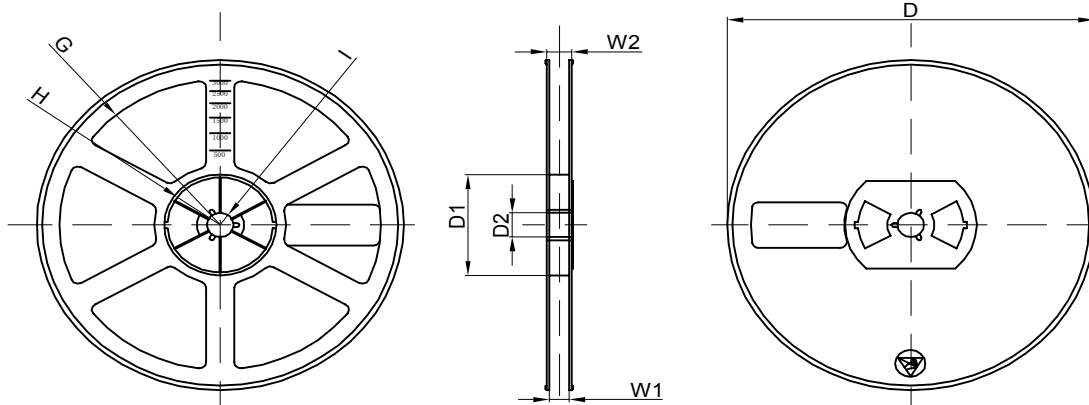


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-363 Tape Leader and Trailer



SOT-363 Reel



Dimensions are in millimeter							
Reel Option	D	D1	D2	G	H	I	W1
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	192x182x182	180,000 pcs	192x182x182	