

■ NPN Plastic-Encapsulate Transistors

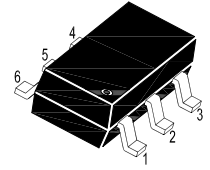
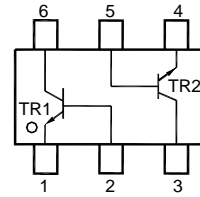
DUAL TRANSISTOR

FEATURES

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

■ Marking

Marking	K2X
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 1. Emitter 2. Base 3. Collector
 4. Emitter 5. Base 6. Collector

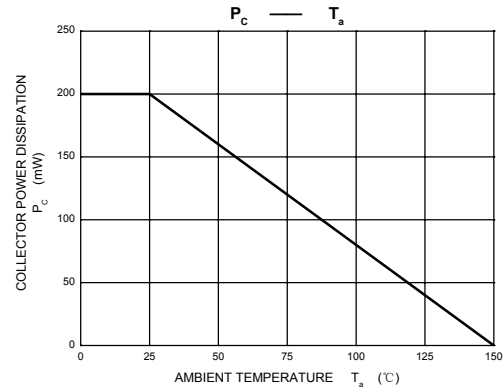
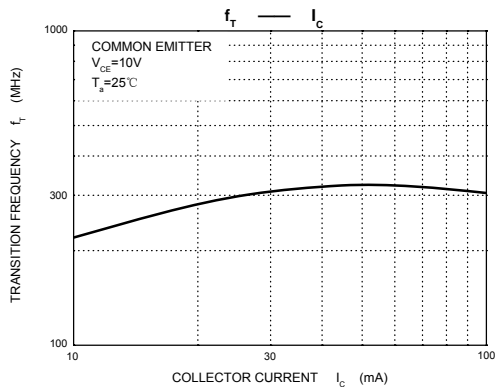
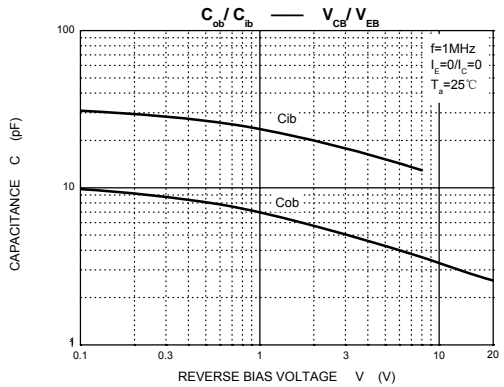
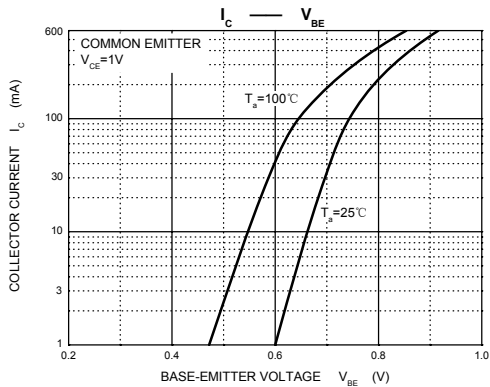
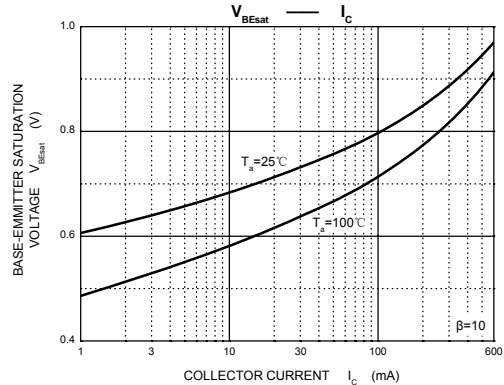
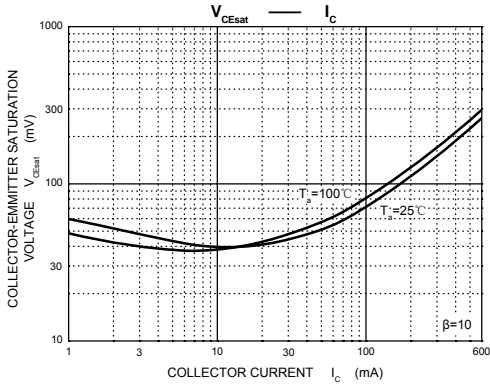
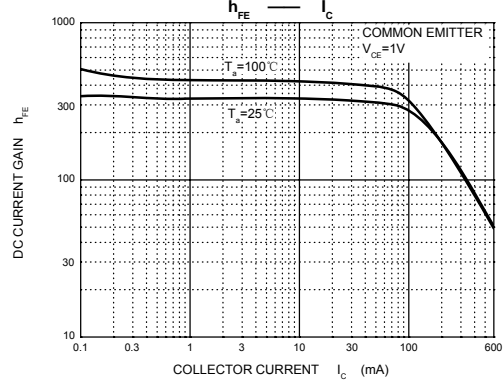
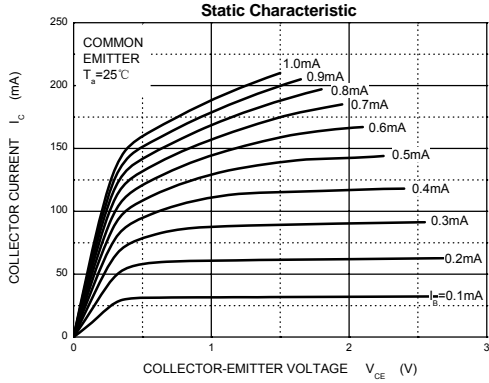
■ Simplified outline(SOT-363)
Maximum Ratings (Ta = 25°C unless otherwise specified)

Symbol	Parameter	Value	Units
V _{CB0}	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 _{θJA}	Thermal Resistance from Junction to Ambient	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55 to +150	°C

NPN 4401 ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

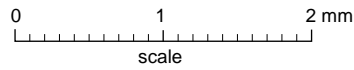
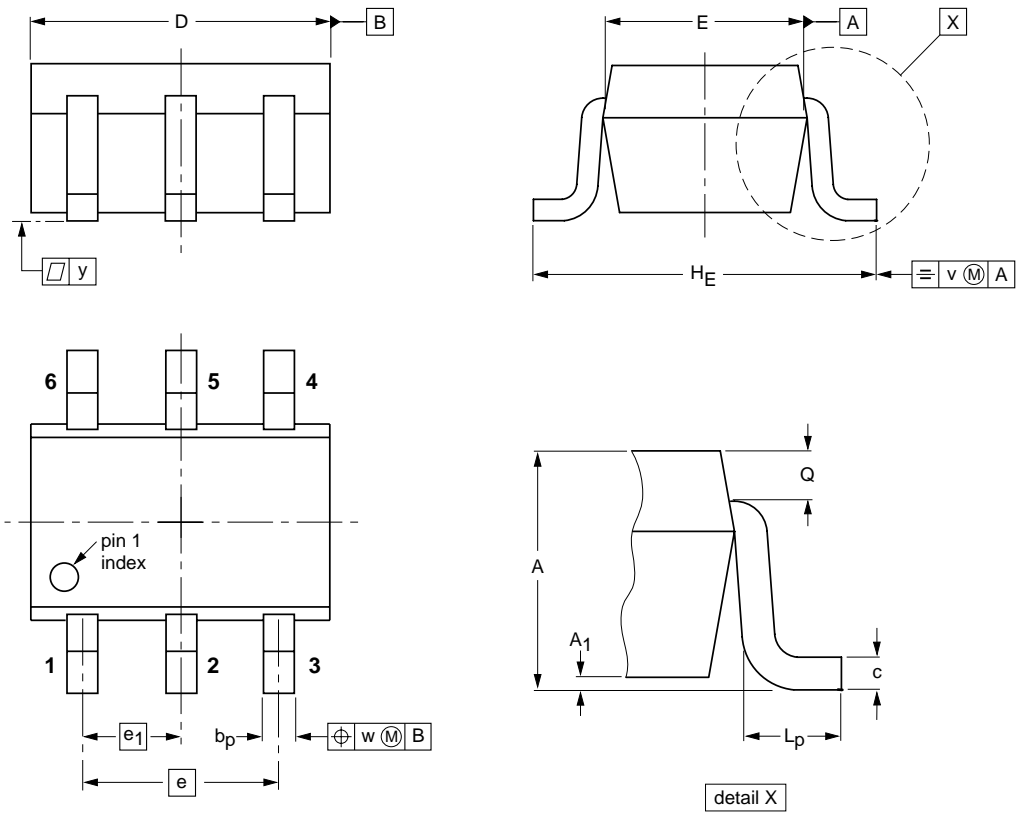
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 100 μA, I _E =0	60		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, I _B =0	40		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 100 μA, I _C =0	6		V
Collector cut-off current	I _{CB0}	V _{CB} = 50 V, I _E =0		0.1	μA
Collector cut-off current	I _{CEO}	V _{CE} = 35 V, I _B =0		0.5	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _C =0		0.1	μA
DC current gain	h _{FE(1)}	V _{CE} = 1V, I _C = 0.1mA	20		
	h _{FE(2)}	V _{CE} = 1V, I _C = 1mA	40		
	h _{FE(3)}	V _{CE} = 1V, I _C = 10mA	80		
	h _{FE(4)}	V _{CE} = 1V, I _C = 150mA	100	300	
	h _{FE(5)}	V _{CE} = 2V, I _C = 500mA	40		
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C =150 mA, I _B = 15mA		0.4	V
	V _{CE(sat)2}	I _C =500 mA, I _B = 50mA		0.75	V
Base-emitter saturation voltage	V _{BE(sat)1}	I _C = 150 mA, I _B = 15mA	0.75	0.95	V
	V _{BE(sat)2}	I _C = 500 mA, I _B = 50mA		1.2	V
Transition frequency	f _T	V _{CE} = 10V, I _C = 20mA, f=100MHz	250		MHz
Output capacitance	C _{ob}	V _{CB} =5V, I _E = 0, f=1MHz		6.5	pF
Delay time	t _d	V _{CC} =30V,		15	nS
Rise time	t _r	V _{BE} =2V, I _C =150mA, I _{B1} =15mA		20	nS
Storage time	t _s	V _{CC} =30V, I _C =150mA, I _{B1} =-I _{B2} =15mA		225	nS
Fall time	t _f			30	nS

Typical Characteristics



Package Outline

SOT-363



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w	y
mm	1.1 0.8	0.1	0.30 0.20	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.25 0.15	0.2	0.2	0.1

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-363	Tape/Reel, 7" reel	3000	EIA-481-1