



2SB1216

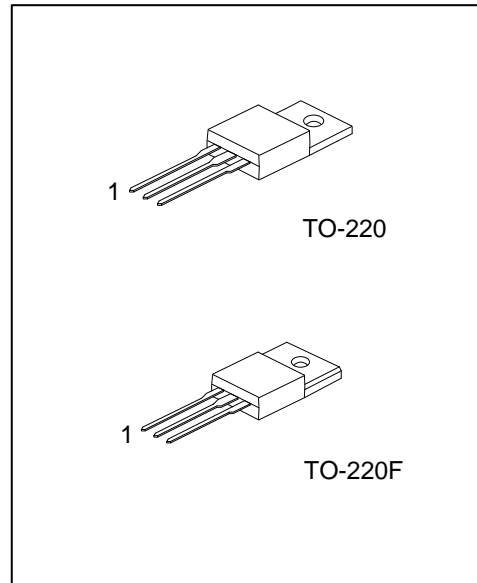
Preliminary

PNP PLANAR TRANSISTOR

HIGH CURRENT SWITCHING APPLICATIONS

FEATURES

- * Low collector-to-emitter saturation voltage
- * Good linearity of h_{FE}
- * Small and slim package facilitating compactness of sets.
- * High f_T
- * Fast switching speed
- * Complement the 2SD1816



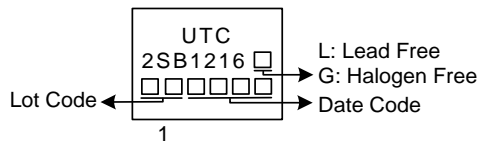
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB1216L-x-TA3-T	2SB1216G-x-TA3-T	TO-220	B	C	E	Tube
2SB1216L-x-TF3-T	2SB1216G-x-TF3-T	TO-220F	B	C	E	Tube

Note: Pin assignment: B: Base C: Collector E: Emitter

<p>2SB1216G-x-TA3-T</p>	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Rank</p> <p>(4) Green Package</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F</p> <p>(3) x: refer to Classification of h_{FE1}</p> <p>(4) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V _{CBO}	-120	V
Collector-Emitter Voltage	V _{CEO}	-100	V
Emitter-Base Voltage	V _{EBO}	-6	V
Collector Current	DC	-4	A
	Pulse(Note 2)	-8	A
Collector Dissipation	P _C	2	W
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-40 ~ +150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Duty=1/2, Pw=20ms.

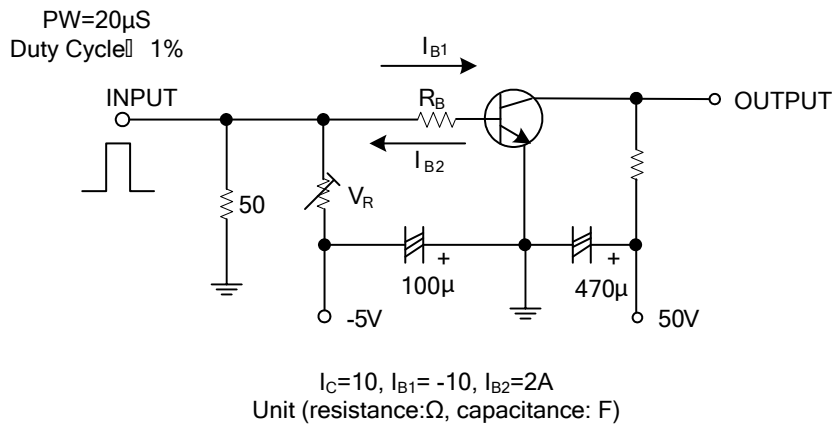
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV _{CBO}	I _C = 10μA, I _E = 0	-120			V
Collector Emitter Breakdown Voltage	BV _{CEO}	I _C = 1mA, R _B = ∞	-100			V
Emitter Base Breakdown Voltage	BV _{EBO}	I _E = 10μA, I _C = 0	-6			V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C = 2A, I _B = 0.2A		-0.9	-1.2	V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C = 2A, I _B = 0.2A		-200	-500	mV
Collector Cut-Off Current	I _{CBO}	V _{CB} = 100 V, I _E = 0			-1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} = 4V, I _C = 0			-1	μA
DC Current Transfer Ratio	h _{FE1}	V _{CE} = 5V, I _C = 0.5A	70		400	
	h _{FE2}	V _{CE} = 5V, I _C = 3A	40			
Transition Frequency	f _T	V _{CE} = 10V, I _C = 0.5A		130		MHz
Output Capacitance	C _{ob}	V _{CB} = 10V, I _E = 0A, f = 1MHz		65		pF
Turn-on Time	t _{ON}	See test circuit		100		ns
Storage Time	t _{STG}	See test circuit		800		ns
Fall Time	t _F	See test circuit		50		ns

■ CLASSIFICATION of h_{FE1}

RANK	Q	R	S	T
RANGE	70 - 140	100 - 200	140 - 280	200 - 400

■ TEST CIRCUIT



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