

UN602

Silicon PNP epitaxial planer transistor (Tr)
Silicon schottky barrier diode (Di)

For DC–DC converter

■ Features

- Two elements incorporated into one package. (Tr+Di)
- Reduction of the mounting area and assembly cost by one half.
- Automatic mounting possible through 12mm wide emboss-tap-ing supply.

■ Basic Part Number of Element

- M253L+B3B07 (Name of developed product)

■ Absolute Maximum Ratings (Ta=25°C)

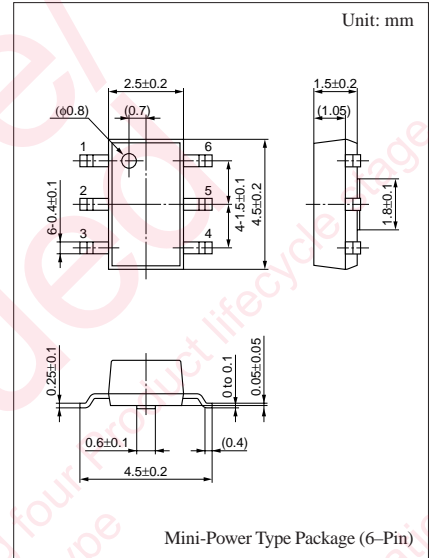
	Parameter	Symbol	Rated	Unit
Transistor block	Collector to base voltage	V_{CBO}	-15	V
	Collector to emitter voltage	V_{CEO}	-11	V
	Emitter to base voltage	V_{EBO}	-7	V
	Collector current	I_C	-3	A
	Peak collector current	I_{CP}	-5	A
	Total power dissipation	P_T^{*1}	1	W
	Junction temperature	T_j	150	°C
	Storage temperature	T_{stg}	-55 to +150	°C
Diode block ²	Reverse voltage	V_R	30	V
	Peak forward current	$I_{F(AV)}$	700	mA
	Non-Repetitive peak forward current	I_{FSM}	2	A
	Non-Repetitive peak forward voltage	V_{RRM}	30	V
	Junction temperature	T_j	125	°C
	Storage temperature	T_{stg}	-55 to +125	°C

^{*1} Printed circuit board: Copper foil area of 4cm² or more and thickness of 1.7mm for the collector portion.

^{*2} Rated input/output frequency: 400MHz

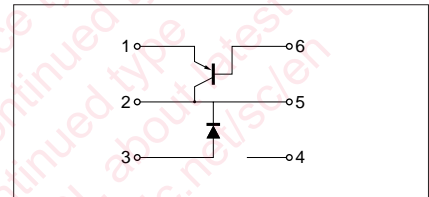
Note: This Schottky barrier diode is sensitive to electric shock (static electricity, etc.).

Be careful about the charge of a human body and leakage of the equipment used.



Marking Symbol: 6B

Internal Connection



■ Electrical Characteristics (Ta=25°C)

● Transistor block

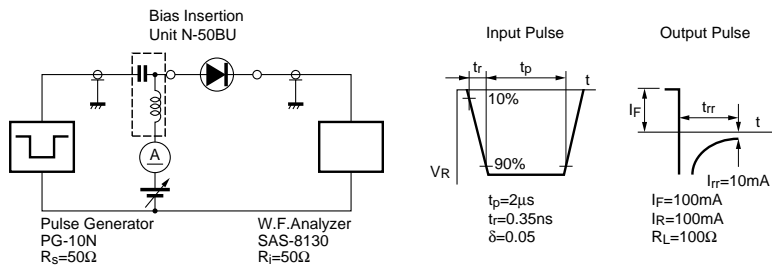
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	$I_C = -10\mu A, I_E = 0$	-15			V
Collector to emitter voltage	V_{CEO}	$I_C = -1mA, I_B = 0$	-11			V
Emitter to base voltage	V_{EBO}	$I_E = -10\mu A, I_C = 0$	-7			V
Collector cutoff current	I_{CBO}	$V_{CB} = -10V, I_E = 0$			-0.1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = -2V, I_C = -500mA^*$	140		560	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.5mA, I_B = -30mA^*$		-0.22	-0.4	V
Transition frequency	f_T	$V_{CB} = -10V, I_E = 50mA, f = 200MHz$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		26		pF

* Pulse test

● Diode block

Parameter	Symbol	Conditions	min	typ	max	Unit
Forward voltage (DC)	V_F	$I_F = 700mA$			0.55	V
Reverse current (DC)	I_R	$V_R = 15V$			80	μA
Pin capacitance	C_t	$V_R = 0V, f = 1MHz$		120		pF
Reverse recovery time	t_{rr}^*	$I_F = I_R = 100mA, I_{rr} = 10mA, R_L = 100\Omega$		7.5		ns

* t_{rr} measuring circuit



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