

# New Jersey Semi-Conductor Products, Inc.

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## 2SB512

EPITAXIAL PLANAR PNP TRANSISTOR

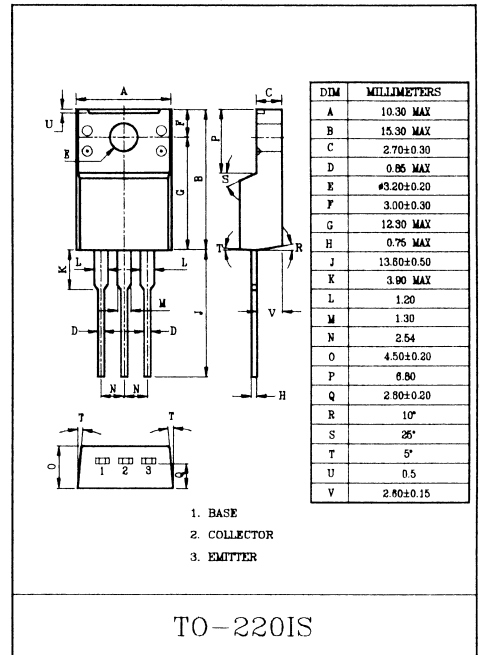
INDUSTRIAL USE.  
 GENERAL PURPOSE APPLICATION.

### FEATURES

- Low Collector Saturation Voltage  
 :  $V_{CE(sat)} = -1.0V(\text{Max.})$  at  $I_C = -2A$ ,  $I_B = -0.2A$ .
- Complementary to KTC2026.

### MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-60	V
Collector-Emitter Voltage	$V_{CEO}$	-60	V
Emitter-Base Voltage	$V_{EBO}$	-7	V
Collector Current	$I_C$	-3	A
Base Current	$I_B$	-0.5	A
Collector Power Dissipation	$P_C$	$T_a = 25^\circ C$	2
		$T_c = 25^\circ C$	25
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 ~ 150	$^\circ C$



### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -60V$ , $I_E = 0$	-	-	-100	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -7V$ , $I_C = 0$	-	-	-100	$\mu A$
Collector-Emitter Breakdown Voltage	$V_{BR(CEO)}$	$I_C = -50mA$ , $I_B = 0$	-60	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = -5V$ , $I_C = -0.1A$	100	-	300	
	$h_{FE(2)}$	$V_{CE} = -5V$ , $I_C = -3A$	20	-	-	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2A$ , $I_B = -0.2A$	-	-0.25	-1.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = -5V$ , $I_C = -0.5A$	-	-0.7	-1.0	V
Transition Frequency	$f_T$	$V_{CE} = -5V$ , $I_C = -0.5A$	-	30	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10V$ , $I_E = 0$ , $f = 1MHz$	-	45	-	pF
Switching Time	Turn-on Time	$t_{on}$		0.4	-	$\mu S$
	Storage Time	$t_{stg}$		1.7	-	
	Fall Time	$t_f$		0.5	-	

Note:  $h_{FE(1)}$  Classification Y:100~200, GR:150~300