



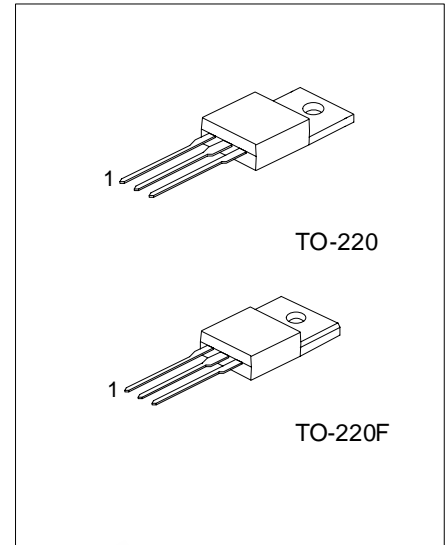
N5027

NPN SILICON TRANSISTOR

HIGH VOLTAGE AND HIGH
RELIABILITY NPN
TRANSISTOR

■ FEATURES

- * High Voltage ($V_{CEO} = 800V$)
- * High Speed Switching
- * Wide SOA



*Pb-free plating product number: N5027L

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
N5027-x-TA3-F-T	N5027L-x-TA3-F-T	TO-220	B	C	E	Tube
N5027-x-TF3-F-T	N5027L-x-TF3-F-T	TO-220F	B	C	E	Tube

<p>N5027L-x-TA3-F-T</p>	<ul style="list-style-type: none"> (1) Packing Type (2) Pin Assignment (3) Package Type (4) Rank (5) Lead Plating <ul style="list-style-type: none"> (1) T: Tube (2) refer to Pin Assignment (3) TA3: TO-220, TF3: TO-220F (4) x: refer to Classification of h_{FE1} (5) L: Lead Free Plating Blank: Pb/Sn
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■ ABSOLUTE MAXIMUM RATINGS ($T_c = 25$)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	850	V
Collector-Emitter Voltage	V_{CEO}	800	V
Collector-Emitter Voltage	V_{EBO}	7	V
Peak Collector Current	I_C	3	A
Collector Current (Pulse)	I_{CP}	10	A
Base Current	I_B	1.5	A
Peak Collector Consume Dissipation	P_C	50	W
Peak Junction Temperature	T_J	150	
Storage Temperature	T_{STG}	-55 ~ +150	

Note 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.

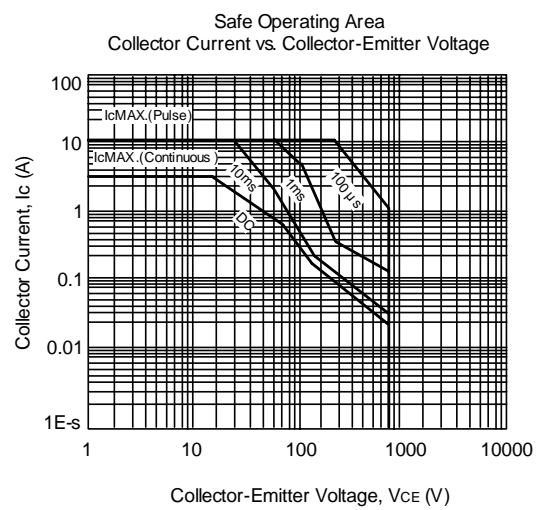
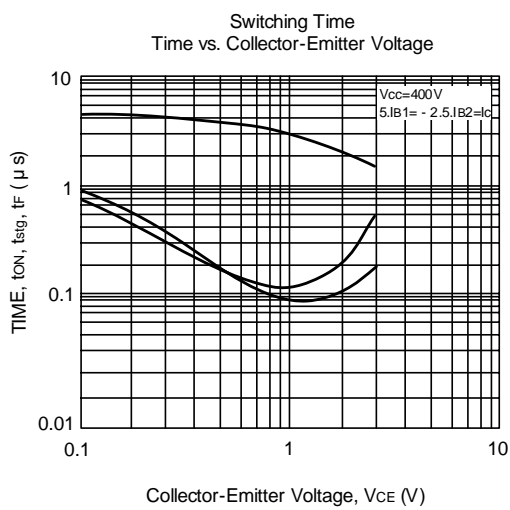
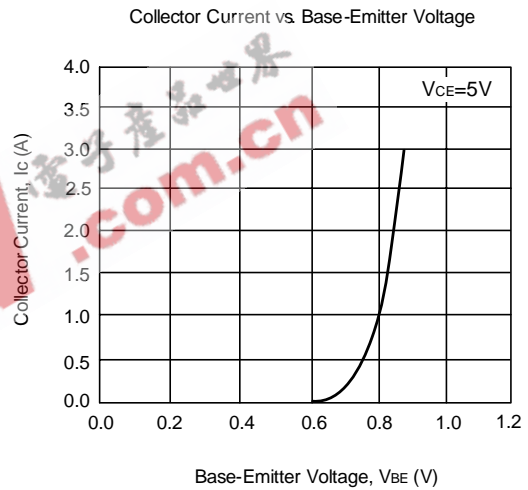
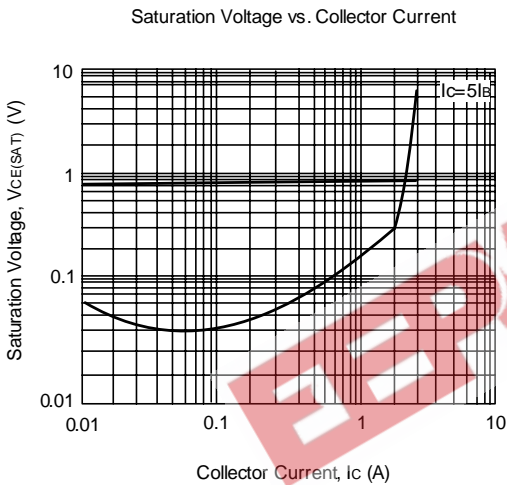
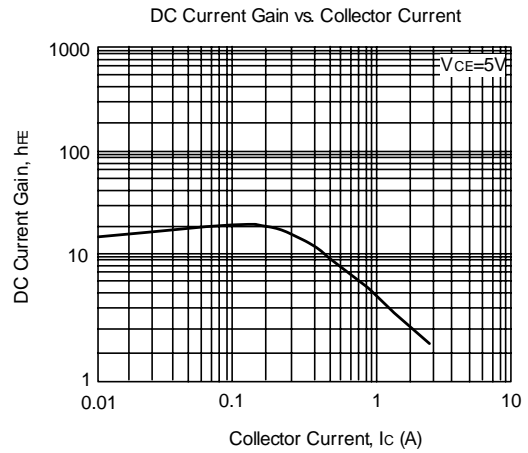
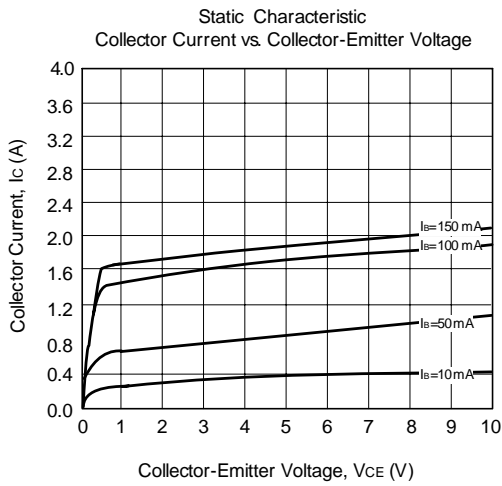
■ ELECTRICAL CHARACTERISTICS ($T_c = 25$, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=1mA, I_E=0$	850			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=5mA, I_B=0$	800			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=1mA, I_C=0$	7			V
Collector-Emitter sustaining Voltage	$V_{CEX(SUS)}$	$I_C=1.5A, I_{B1}=-I_{B2}=0.3A$ $L=2mH, \text{Clamped}$	800			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=800V, I_E=0$			10	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$			10	μA
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=0.2A$	10		40	
	h_{FE2}	$V_{CE}=5V, I_C=1A$	6			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=1A, I_B=0.3A$			1.1	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=1.5A, I_B=0.3A$			1.5	V
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz, I_E=0$		60		pF
Current Gain Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.2A$		15		MHz
Turn ON Time	t_{ON}	$V_{CC}=400V$			0.5	μs
Storage Time	t_{STG}	$I_C=5I_{B1}=-2.5I_{B2}=2A$			3	μs
Fall Time	t_F	$R_L=200$			0.3	μs

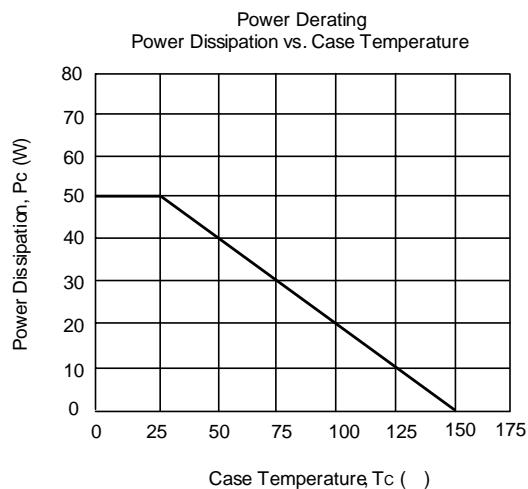
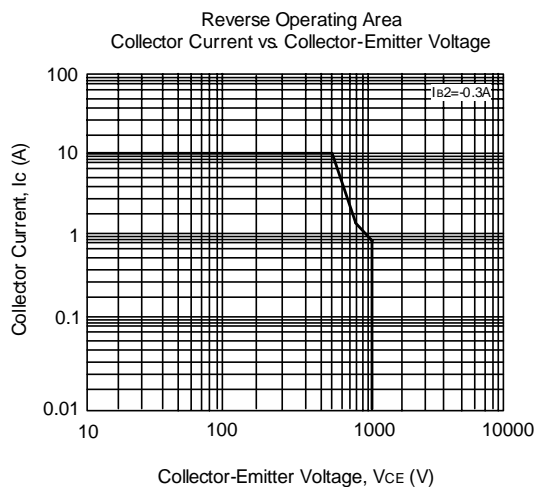
■ CLASSIFICATION of h_{FE1}

RANK	N	R	O
RANGE	10 ~ 20	15 ~ 30	20 ~ 40

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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