



UNISONIC TECHNOLOGIES CO., LTD

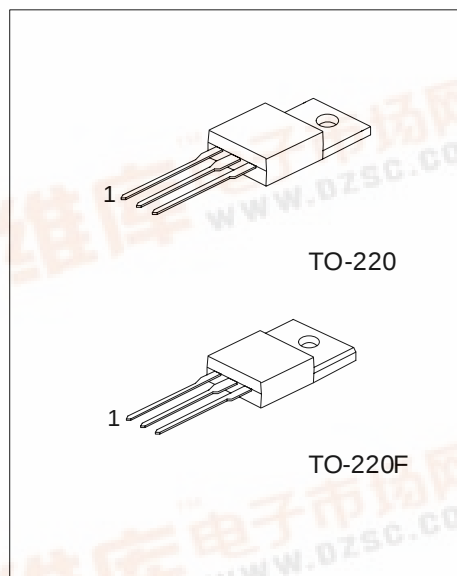
2SC5027

NPN SILICON TRANSISTOR

HIGH VOLTAGE AND HIGH RELIABILITY

FEATURES

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



*Pb-free plating product number: 2SC5027L

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SC5027-x-TA3-T	2SC5027L-x-TA3-T	TO-220	B	C	E	Tube
2SC5027-x-TF3-T	2SC5027L-x-TF3-T	TO-220F	B	C	E	Tube

2SC5027L-x-TA3-T	(1) Packing Type	(1) T: Tube
	(2) Package Type	(2) TA3: TO-220, TF3: TO-220F
	(3) Rank	(3) x: refer to Classification of h_{FE1}
	(4) Lead Plating	(4) L: Lead Free Plating, Blank: Pb/Sn

2SC5027

NPN SILICON TRANSISTOR

■ 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
Power Dissipation	P_C	50	W
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.

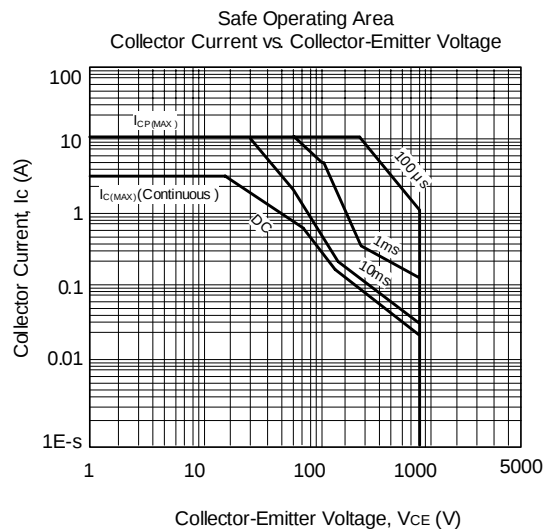
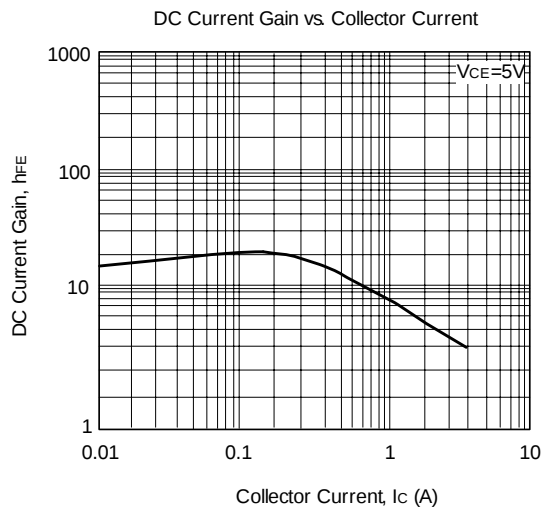
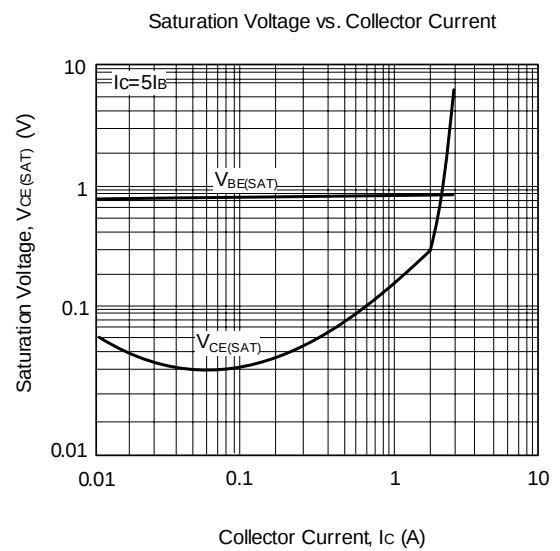
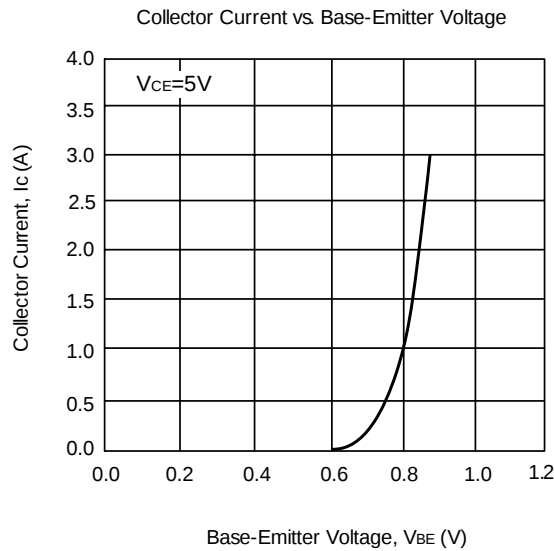
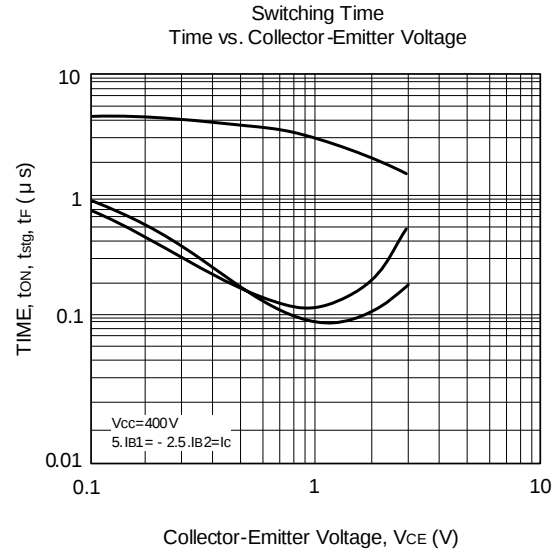
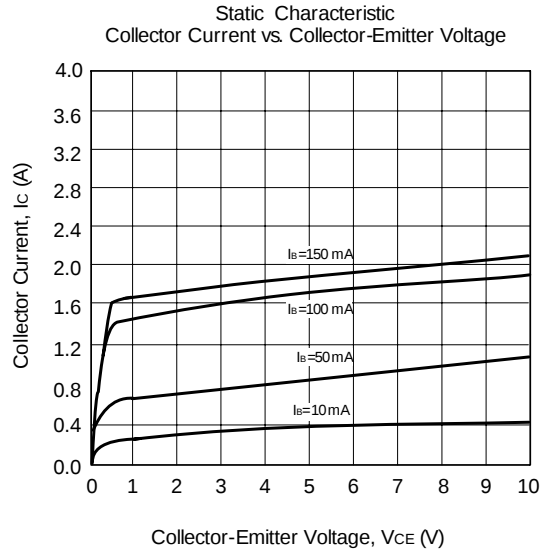
■ ELECTRICAL CHARACTERISTICS ($T_c = 25$, unless otherwise specified.)

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}	$V_{CE}=5V, I_C=1A$	8			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=1.5A, I_B=0.3A$			2	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_S	$I_C=5I_{B1}=-2.5I_{B2}=2A$			3	μs
Fall Time	t_F	$R_L=200\Omega$			0.3	μs

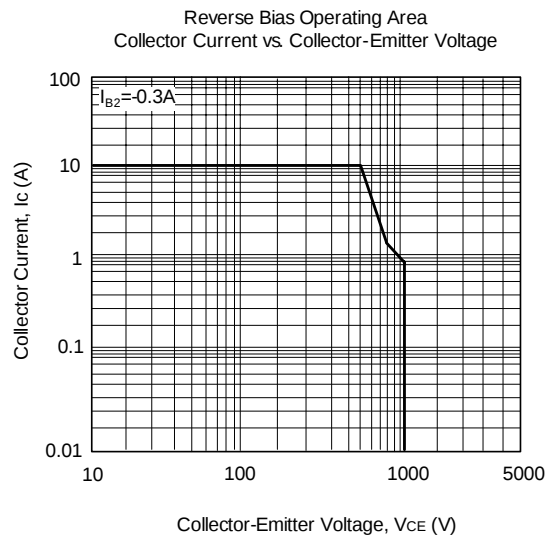
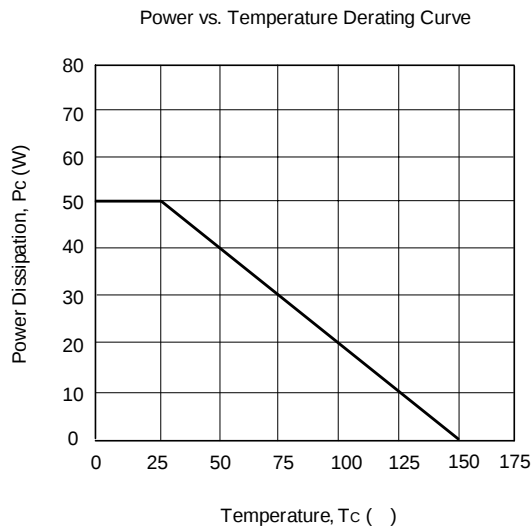
■ CLASSIFICATION of h_{FE1}

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

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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