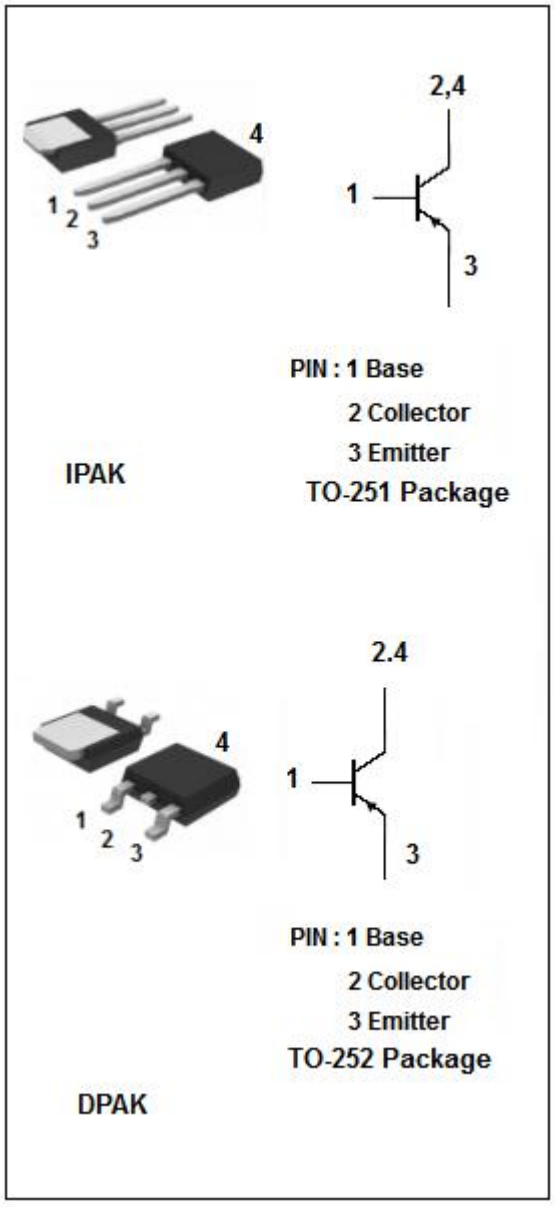
isc Silicon PNP Power Transistor STD2805

DESCRIPTION

- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= -0.6V(Max)(I_C= -5A; I_B= -0.25A)
- DC Current Gain -h_{FE} = 85(Min)@ I_C= -5A
- Fast -Switching speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- CCFL dirvers
- Voltage regulators
- Relay dirvers
- High efficiency low voltage switching applications



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current-Continuous	-5	A
I_{CM}	Collector Current-Peak	-10	A
I_B	Base Current	-2	A
P_C	Total Power Dissipation @ T_C=25℃	15	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	8.33	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E=-0.1mA,I_C=0	-6			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C=-1mA, I_B=0	-60			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C=-0.1mA ,I_E=0	-60			V
$V_{CE(sat)}$ *	Collector-Emitter Saturation Voltage	I_C= -100mA; I_B= -5mA			-50	mV
		I_C= -2A; I_B= -50mA			-0.3	V
		I_C= -3A; I_B= -0.15A			-0.4	V
		I_C= -5A; I_B= -0.2A			-0.6	V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C= -2A; I_B= -50mA			-1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -60V; I_E= 0			-100	nA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C=0			-100	nA
h_{FE}*	DC Current Gain	I_C= -100mA; V_{CE}= -2V	200		400	
		I_C= -5A; V_{CE}= -2V	85			
		I_C= -10A; V_{CE}= -2V	20			
f_T	Current-Gain—Bandwidth Product	I_C= -50mA ;V_{CE}= -10V		150		MHZ
C_{OB}	Output Capacitance	V_{CB}=-10V;f=1.0MHz		60		pF

* Pulse Test: PW≤300μs, Duty Cycle≤1.5%

Switching Times; Resistive Load

t_{on}	Tur-on Time	I_C= -1A; V_{CC}= 30V; I_{B1}= I_{B2}= -0.1A		80		ns
t_s	Storage Time			600		ns
t_f	Fall Time			70		ns

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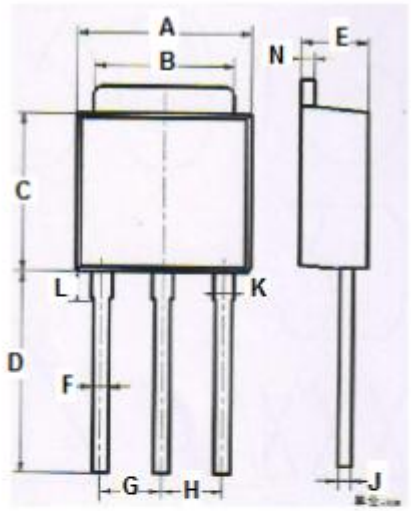
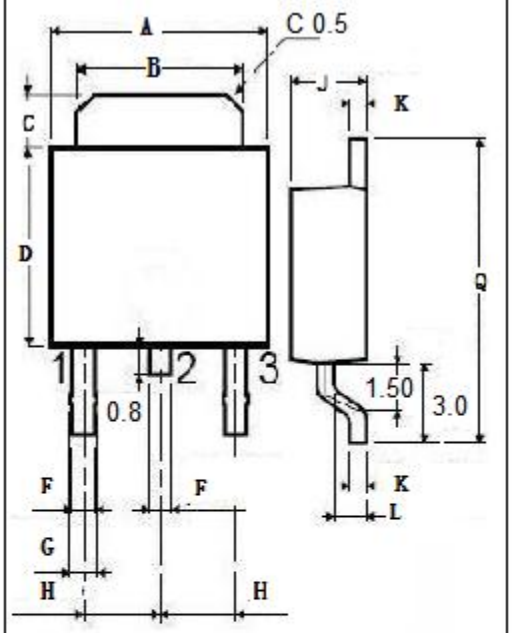
Outline Drawing



DIM	mm MIN	MAX
A	6.40	6.48
B	5.10	5.50
C	5.80	6.20
D	9.20	9.60
E	2.20	2.40
F	0.50	0.70
G	2.09	2.49
H	2.09	2.49
J	0.40	0.60
K	0.70	0.90
L	1.60	2.00
N	0.40	0.60



DIM	mm MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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