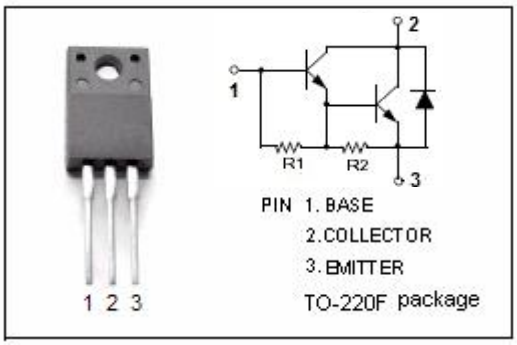
isc Silicon NPN Darlington Power Transistor 2SD2161

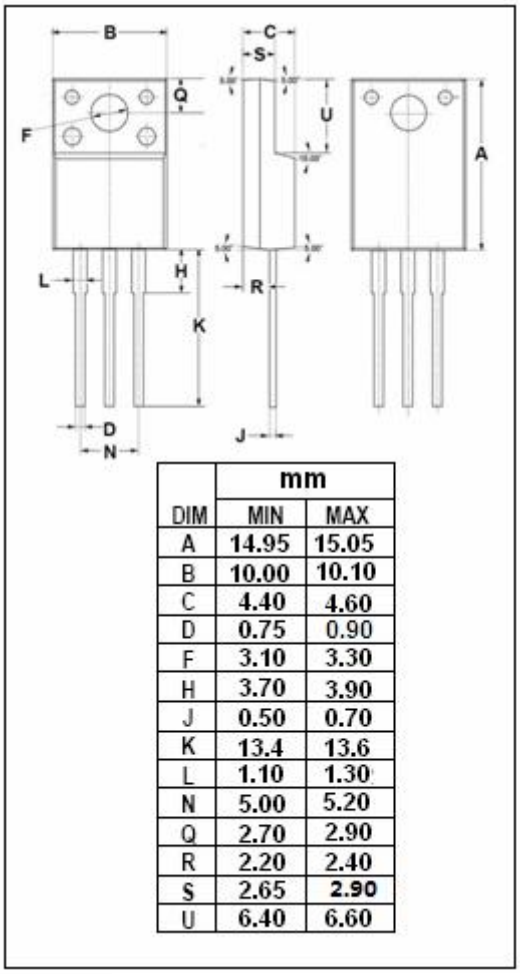
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 100V(Min)
- High DC Current Gain-
  : h_{FE}= 2000(Min)@ (V_{CE}= 2V, I_C= 2A)
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 1.5V(Max)@ (I_C= 2A, I_B= 2mA)



APPLICATIONS

- Designed for low-frequency power amplifiers and low-speed switching applications.



DIM	mm MIN	mm MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	0.5	A
P_C	Collector Power Dissipation @T_a=25℃	2	W
	Collector Power Dissipation @T_C=25℃	20	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

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ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 2mA			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 2mA			2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V; I_E= 0			1.0	μA
h_{FE-1}	DC Current Gain	I_C= 2A; V_{CE}= 2V	2000	8000	20000	
h_{FE-2}	DC Current Gain	I_C= 4A; V_{CE}= 2V	500			
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A; V_{CE}= -5V		30		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= -10V; f_{test}= 1MHz		35		pF
Switching Times						
t_{on}	Turn-on Time	I_C=2A, I_{B1}= I_{B2}= 2mA, V_{CC}≈ -50V; R_L= 25Ω		1.0		μs
t_{stg}	Storage Time			3.5		μs
t_f	Fall Time			1.2		μs

◆ h_{FE-1} Classifications

M	L	K
2000-5000	4000-10000	8000-20000