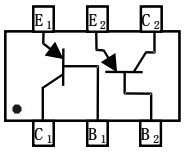
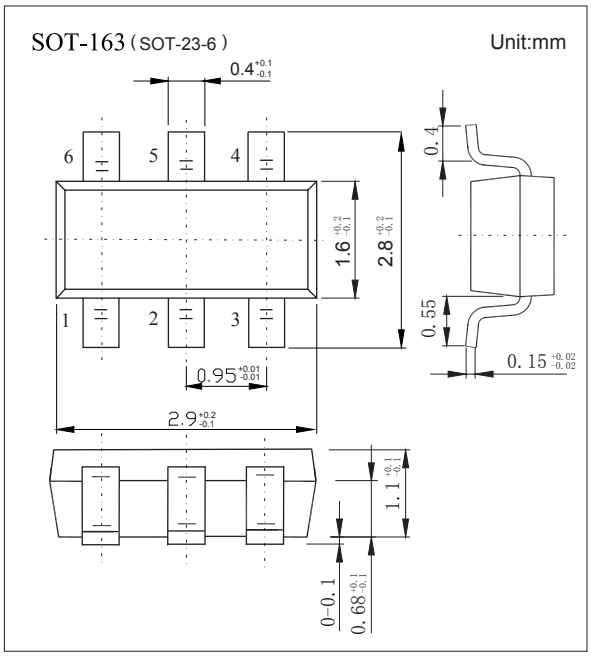
Features

- Epitaxial Planar Die Construction
- Complementary NPN Type Available (DMMT5551)
- Ideal for Medium Power Amplification and Switching
- Intrinsically Matched PNP Pair (Note 1)
- 2% Matched Tolerance, hFE, VCE(SAT), VBE(SAT)
- 1% Matched Tolerance, Available (Note 2)
- Also Available in Lead Free Version
- Marking:K4S





Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-160	V
Collector - Emitter Voltage	V_{CEO}	-150	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-200	mA
Collector Power Dissipation	P_D	300	mW
Thermal Resistance, Junction to Ambient (Note 3)	$R_{\theta JA}$	417	K/W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to +150	

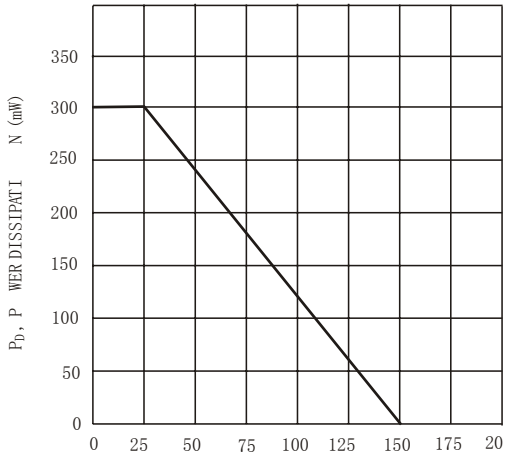
Notes:

1. Built with adjacent die from a single wafer.
2. Contact the Diodes, Inc. Sales department.
3. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at

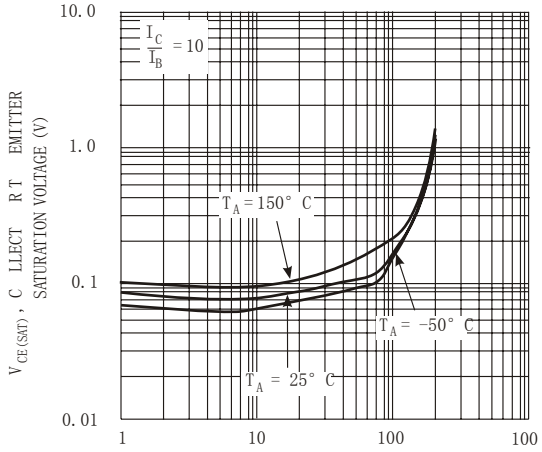
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -100 μA， I_E=0	-160			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA， I_B=0	-150			V
Emitter - base breakdown voltage	V_{EBO}	I_E= -100μA， I_C=0	-5			V
Collector-base cut-off current	I_{CBO}	V_{CB} = -120V, I_E = 0			-50	nA
		V_{CB} = -120V, I_E = 0, T_A = 100℃				μA
Emitter cut-off current	I_{EBO}	V_{EB} = -3.0V, I_C = 0			-50	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = -10mA, I_B = -1.0mA			-0.2	V
		I_C = -50mA, I_B = -5.0mA			-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C = -10mA, I_B = -1.0mA			-1	V
		I_C = -50mA, I_B = -5.0mA				V
DC current gain	h_{FE}	I_C = -1.0mA, V_{CE} = -5.0V	50			
		I_C = -10mA, V_{CE} = -5.0V	60		240	
		I_C = -50mA, V_{CE} = -5.0V	50			
Small Signal Current Gain		V_{CE} = -10V, I_C = -1.0mA,f = 1.0kHz	40			
Collector output capacitance	C_{obo}	V_{CB} = -10V, f = 1.0MHz, I_E = 0			6	pF
Transition frequency	f_T	V_{CE}= -10V, I_C= -10mA,f=100MHz	100		300	MHz
Noise Figure	N_F	V_{CE} = -5.0V, I_C = -200uA R_S = 10Ω, f=1.0kHz			8	dB

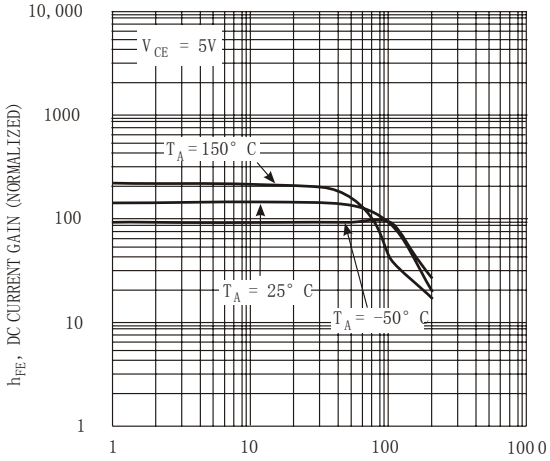
Typical Performance Characteristics (T_A=25℃ unless otherwise Specified)



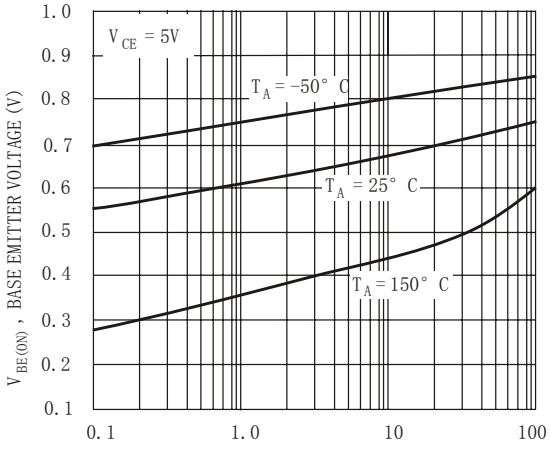
T_A, AMBIENT TEMPERATURE (° C)
Fig. 1, Max Power Dissipation vs Ambient Temperature



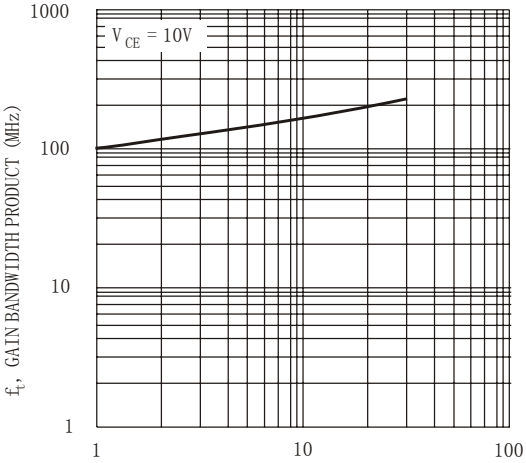
I_C, COLLECTOR CURRENT (mA)
Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current



I_C, COLLECTOR CURRENT (mA)
Fig. 3, DC Current Gain vs Collector Current



I_C, COLLECTOR CURRENT (mA)
Fig. 4, Base Emitter Voltage vs. Collector Current



I_C, COLLECTOR CURRENT (mA)
Fi . 5, Gain Bandwidth Product vs Collector Current