DATA SHEET

NEC

SILICON SWITCHING DIODE
1SS305

HIGH SPEED SWITCHING
SILICON EPITAXIAL DIODE

FEATURES

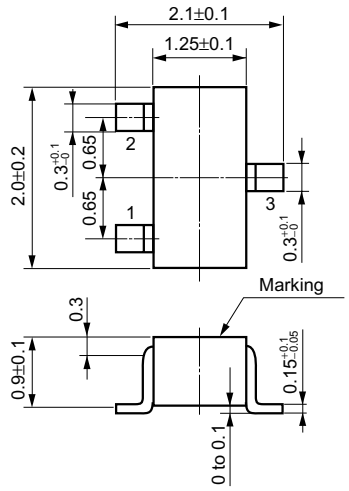
- Low capacitance: C_t = 4.0 pF MAX.
- High speed switching: t_{rr} = 3.0 ns MAX.
- Wide applications including switching, limitter, clipper.

ABSOLUTE MAXIMUM RATINGS

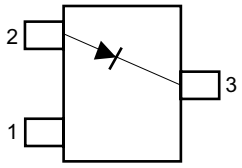
Maximum Voltages and Currents (T_A = 25°C)

Peak Reverse Voltage	V_{RM}	100	V
DC Reverse Voltage	V_R	100	V
Peak Forward Current	I_{FM}	300	mA
Average Rectified Current	I_O	100	mA
DC Forward Current	I_F	100	mA
Maximum Temperatures			
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	–55 to + 150	°C
Thermal Resistance			
Junction to Ambient	$R_{th(j-a)}$	0.85	°C/mW

PACKAGE DIMENSIONS (Unit: mm)



CONNECTION DIAGRAM (Top View)



1. N.C.
2. Anode
3. Cathode

Marking : A14

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_{F1}	I_F = 10 mA		720	850	mV
	V_{F2}	I_F = 50 mA		850	1000	mV
	V_{F3}	I_F = 100 mA		950	1200	mV
Reverse Current	I_R	V_R = 100 V			1.0	μA
Capacitance	C_t	V_R = 0 V, f = 1.0 MHz		2.0	4.0	pF
Reverse Recovery Time	t_{rr}	I_F = 10 mA, V_R = 6 V, R_L = 100 Ω, See Test Circuit.			3.0	ns

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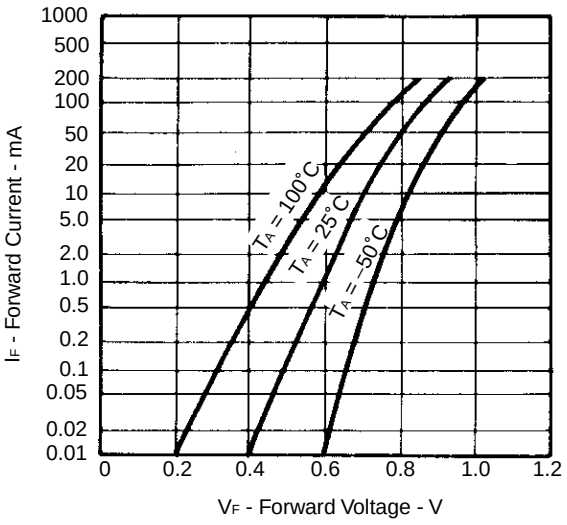
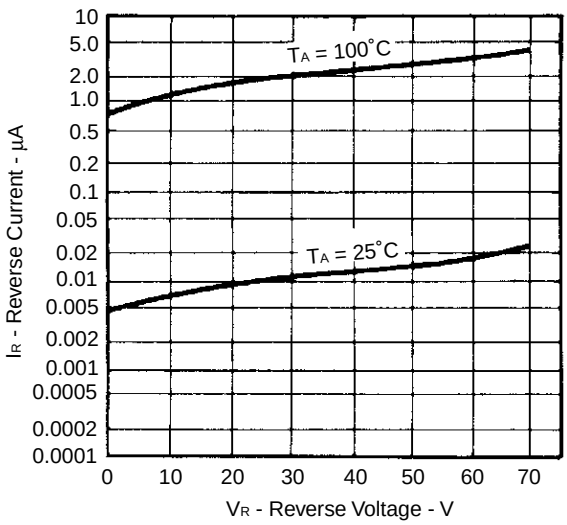
TYPICAL CHARACTERISTICS (T_A = 25°C)

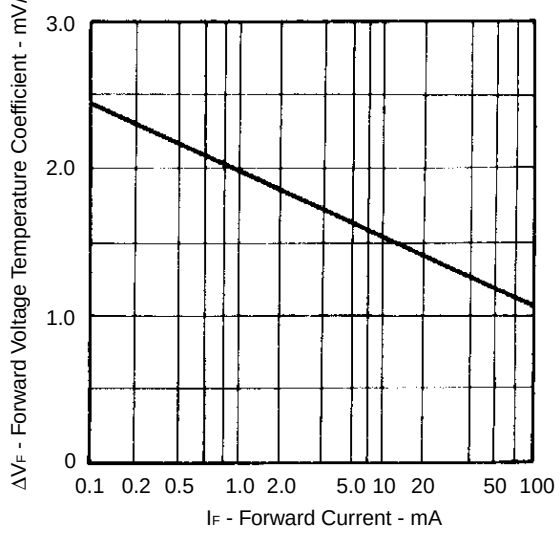
FORWARD CURRENT vs.
FORWARD VOLTAGE



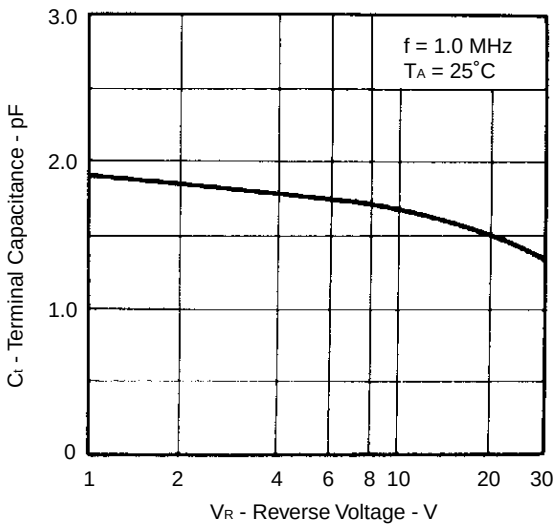
REVERSE CURRENT vs.
REVERSE VOLTAGE



FORWARD VOLTAGE TEMPERATURE
COEFFICIENT vs. FORWARD CURRENT

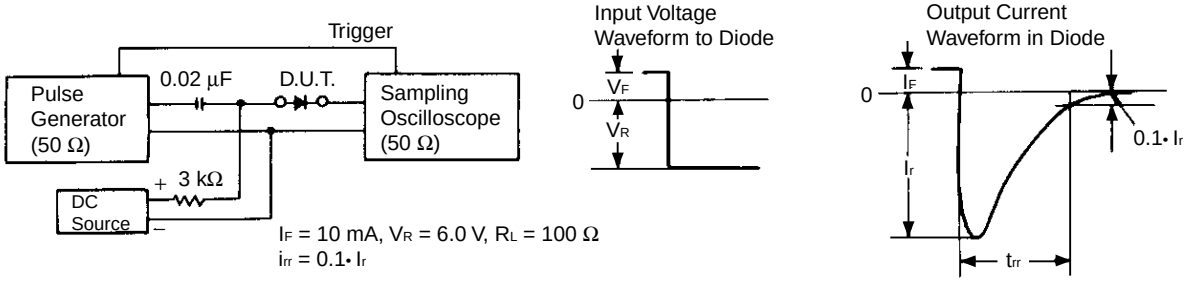


TERMINAL CAPACITANCE vs.
REVERSE VOLTAGE



SWITCHING CHARACTERISTICS TEST CIRCUIT

Reverse recovery time : t_{rr}



I_F = 10 mA, V_R = 6.0 V, R_L = 100 Ω

i_{rr} = 0.1• I_r