



SMAF Plastic-Encapsulate Diodes

SS12F THRU SS120F Schottky Rectifier Diodes

Features

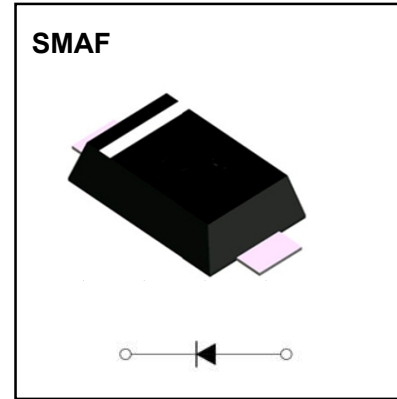
- $I_{F(AV)}$ 1A
- V_{RRM} 20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- SS1X
X : From 2 To 20



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SS1														
				2F	3F	4F	5F	6F	8F	10F	15F	20F						
Repetitive Peak Reverse Voltage	V_{RRM}	V		20	30	40	50	60	80	100	150	200						
Maximum RMS Voltage	V_{RMS}	V		14	21	28	35	42	56	70	105	140						
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load	1.0														
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	30														
Junction Temperature	T_J	$^\circ\text{C}$		-55~+125					-55~+150									
Storage Temperature	T_{STG}	$^\circ\text{C}$		-55 ~ +150														

Electrical Characteristics ($T = 25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition	SS1														
				2F	3F	4F	5F	6F	8F	10F	15F	20F						
Peak Forward Voltage	V_F	V	$I_F=1.0\text{A}$	0.55		0.70		0.85		0.95								
Peak Reverse Current	I_{RRM1}	mA	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$		0.5				0.1								
	I_{RRM2}			$T_a=100^\circ\text{C}$		10				5.0								
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient		81													
	$R_{\theta J-L}$		Between junction and terminal		9.5													
Junction Capacitance (Typical)	C_j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C		40		30		26		20							

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

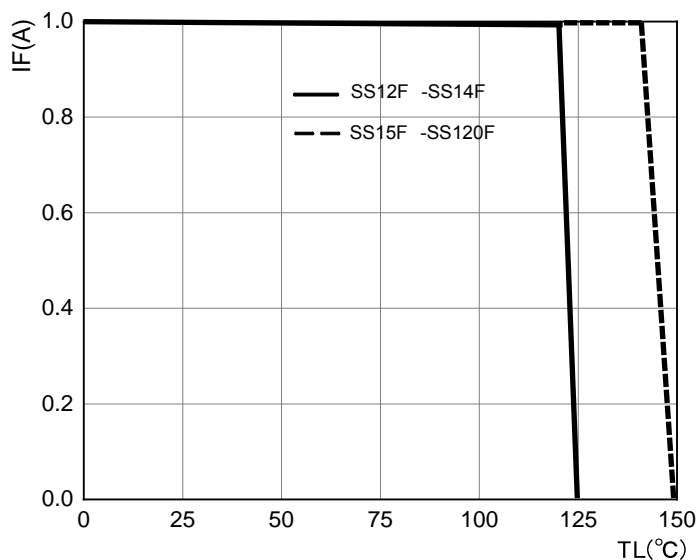
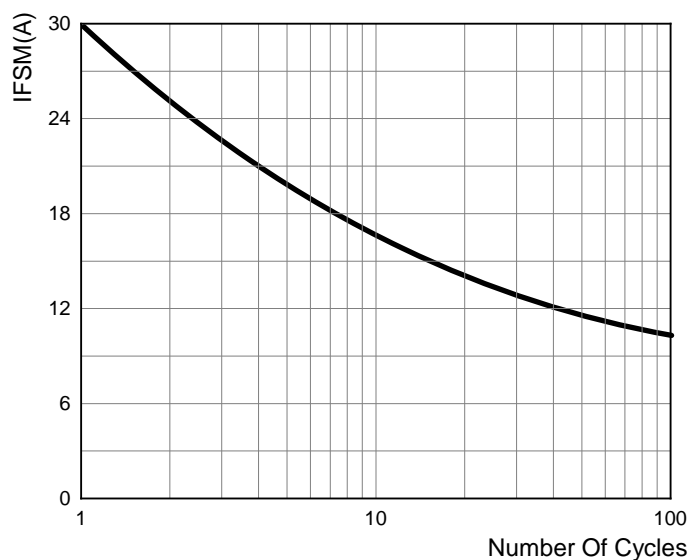
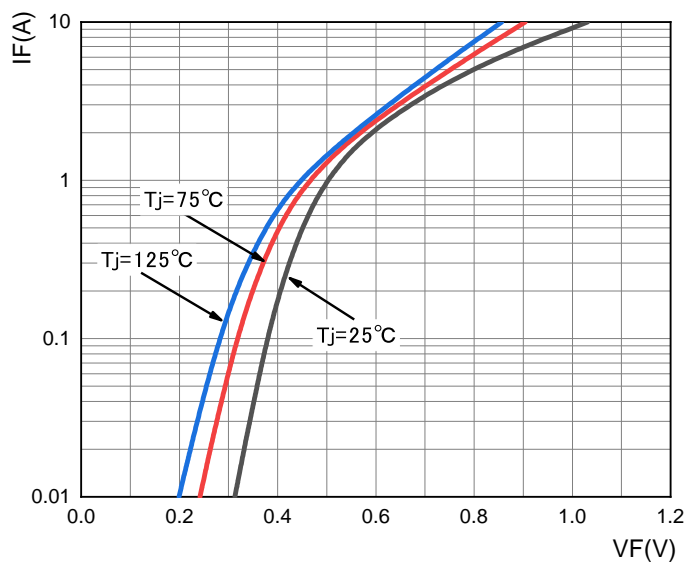


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



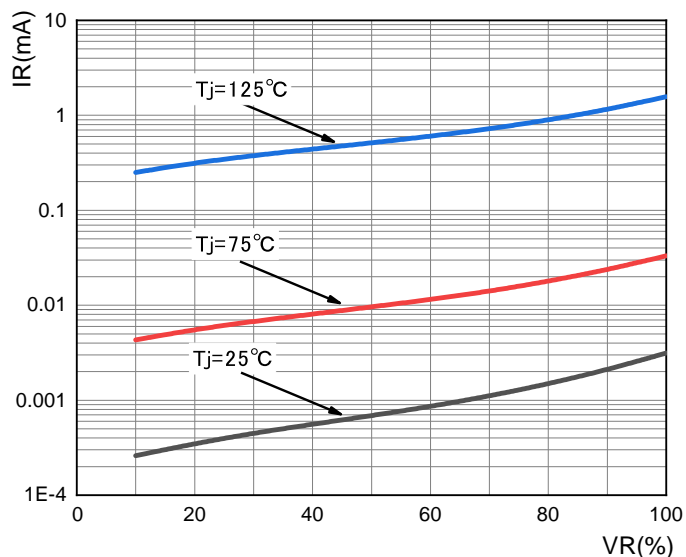
SS12F-SS14F

FIG.3:TYPICAL FORWARD CHARACTERISTICS



SS12F-SS14F

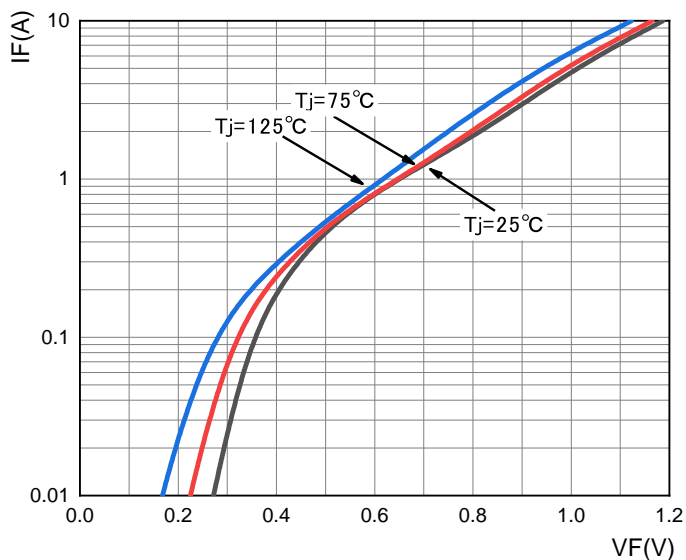
FIG.4: TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

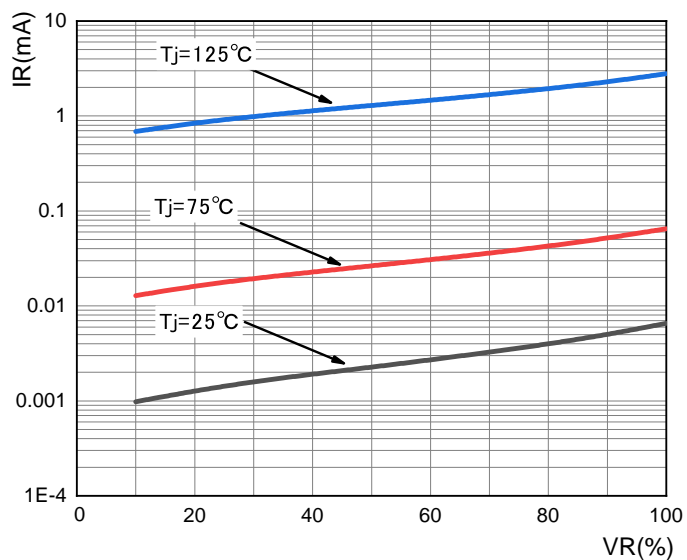
SS15F-SS16F

FIG.5: TYPICAL FORWARD CHARACTERISTICS



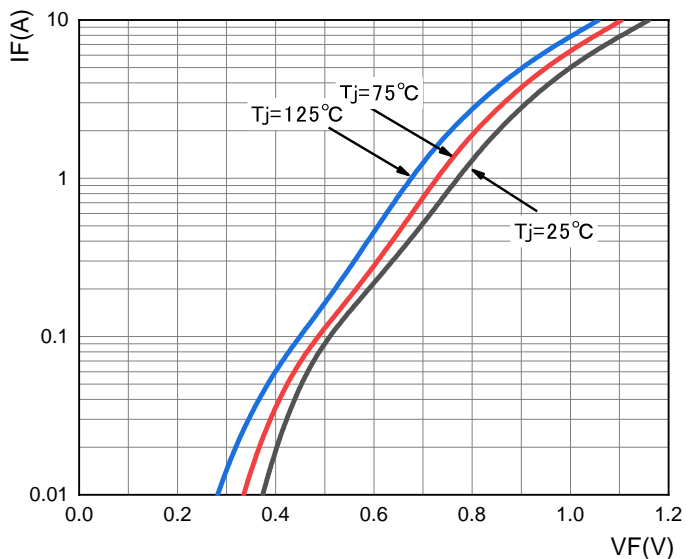
SS15F-SS16F

FIG.6: TYPICAL REVERSE CHARACTERISTICS



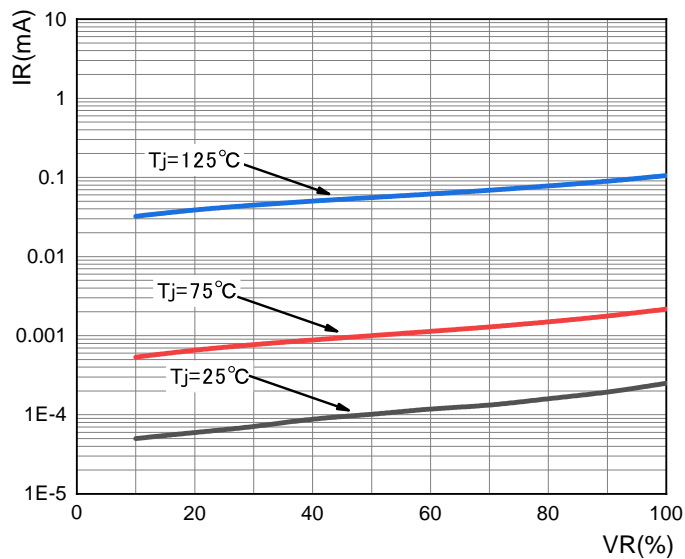
SS18F-SS110F

FIG.7: TYPICAL FORWARD CHARACTERISTICS



SS18F-SS110F

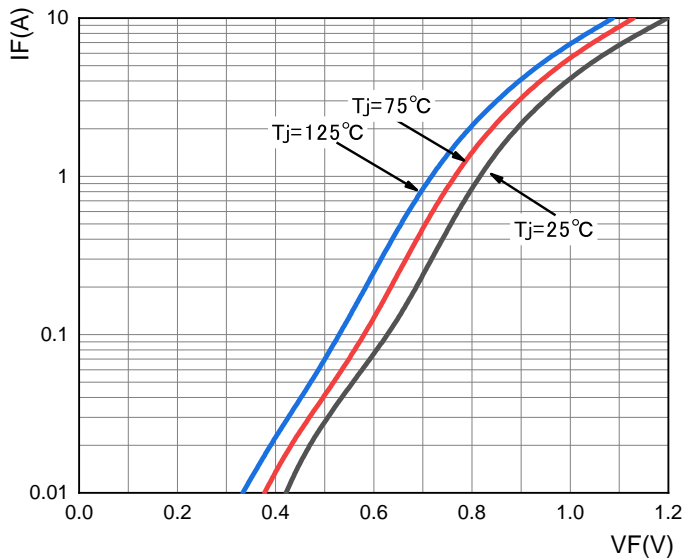
FIG.8: TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

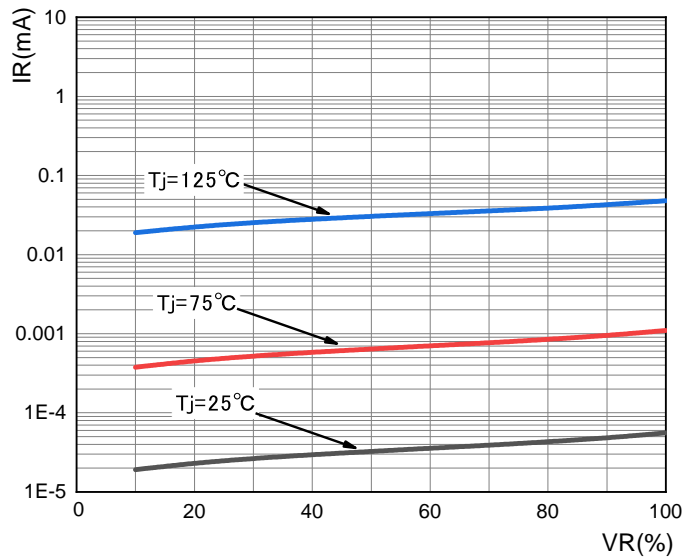
SS115F

FIG.9: TYPICAL FORWARD CHARACTERISTICS



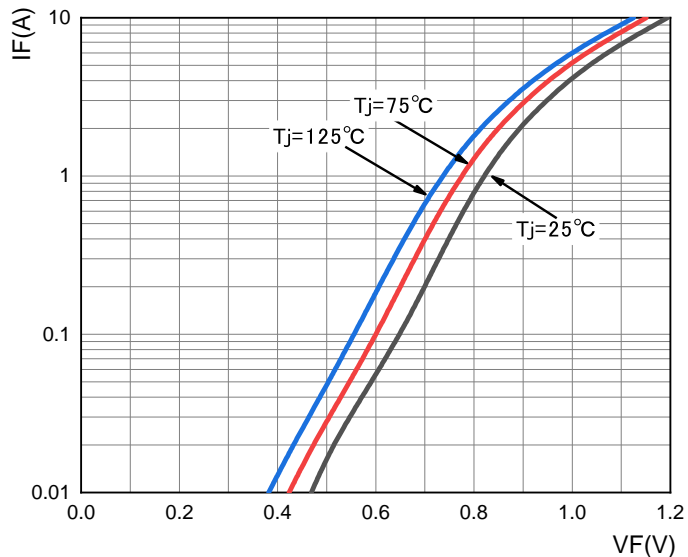
SS115F

FIG.10: TYPICAL REVERSE CHARACTERISTICS



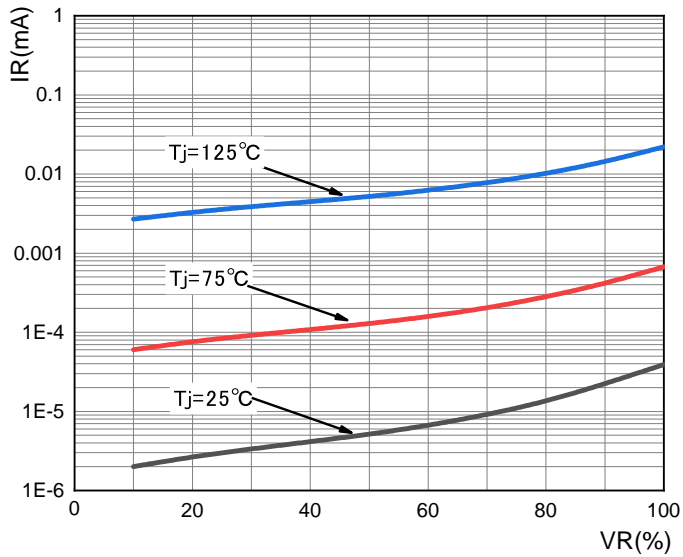
SS120F

FIG.11: TYPICAL FORWARD CHARACTERISTICS

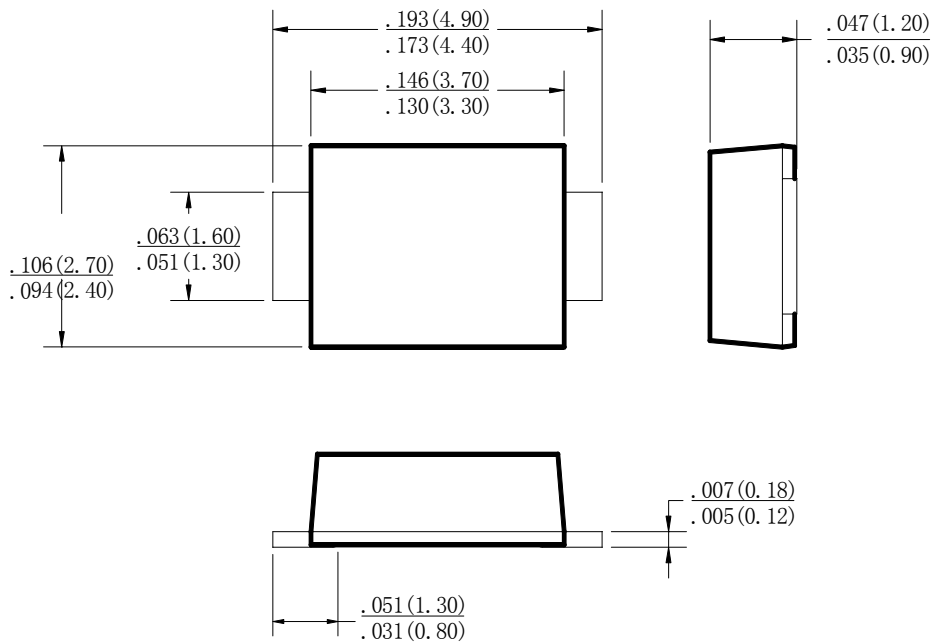


SS120F

FIG.12: TYPICAL REVERSE CHARACTERISTICS

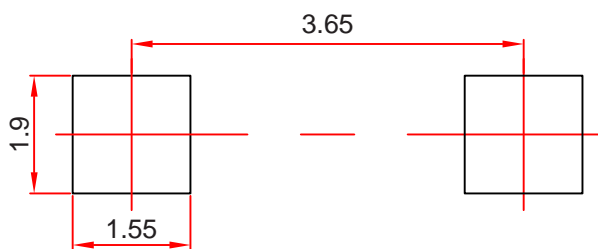


SMAF Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAF Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Reel Taping Specifications For Surface Mount Devices- SMAF

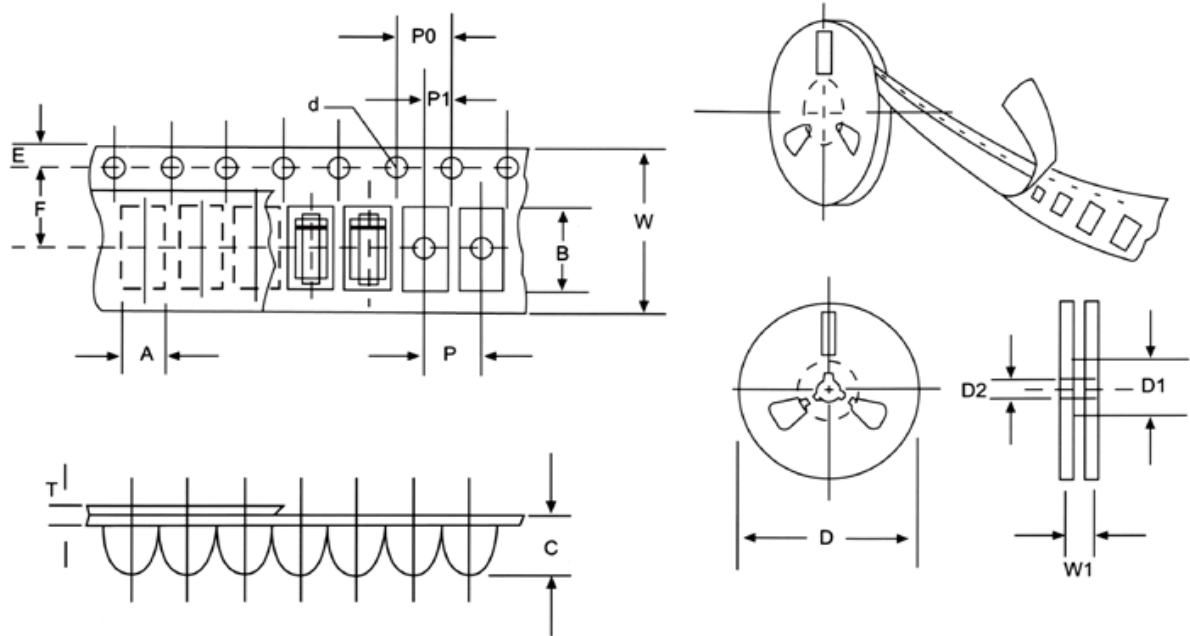


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMAF mm(inch)
Carrier width	A	2.83+0.1(0.112+0.004)
Carrier length	B	4.90+0.1(0.193+0.004)
Carrier depth	C	1.45+0.1(0.057+0.004)
Sprocket hole	d	1.55+0.05(0.061+0.002)
Reel outside diameter	D	178+2.0(7.0+0.079)
Reel inner diameter	D1	54±1.0(2.13±0.039)
Feed hole diameter	D2	13+0.5(0.512+0.020)
Sprocket hole position	E	1.75+0.1(0.069+0.004)
Punch hole position	F	5.5+0.05(0.217+0.002)
Punch hole pitch	P	4.0+0.1(0.157+0.004)
Sprocket hole pitch	P0	4.0+0.1(0.157+0.004)
Embossment center	P1	2.0+0.1(0.079+0.004)
Total tape thickness	T	0.23-0.29(0.009-0.011)
Tape width	W	12.0+0.1(0.472+0.004)
Reel width	W1	16.8+2.0(0.661+0.079)

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.