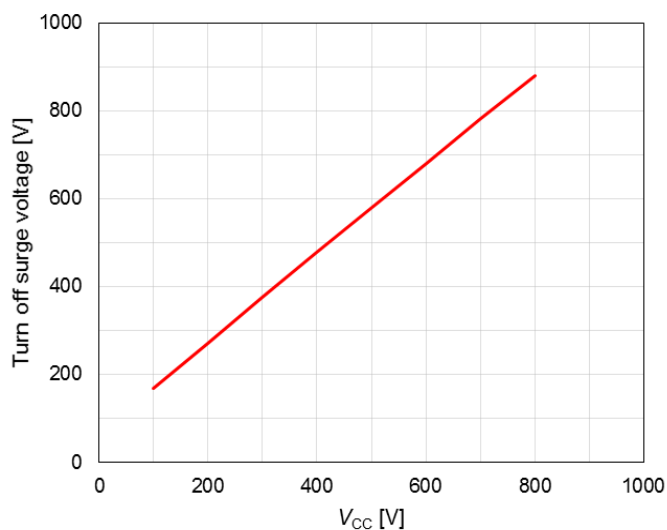


## Discrete IGBT FGW40N120HD Surge Voltage Characteristics

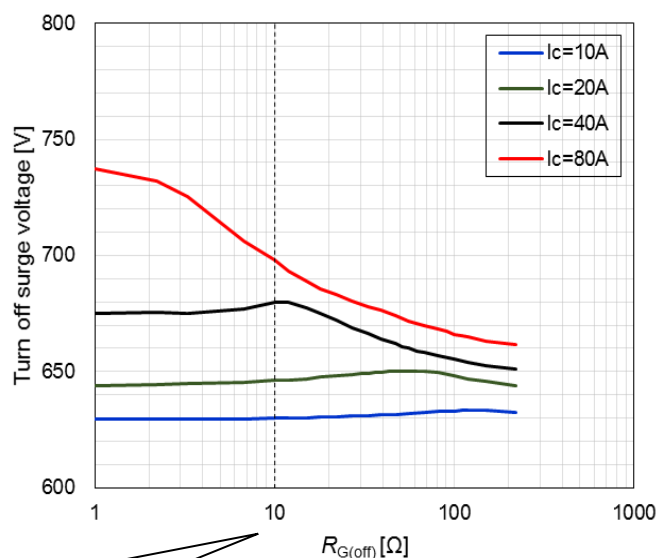
(1) Turn off surge voltage vs. Supply voltage ( $V_{CC}$ )

Conditions:  $V_{CC} = \text{var.}$ ,  $I_C = 40\text{A}$ ,  $V_{GE} = 15\text{V}/0\text{V}$ ,  $R_{G(\text{off})} = 10\Omega$ ,  $T_{vj} = \text{R.T.}$



(2) Turn off surge voltage vs. Gate resistance ( $R_{G(\text{off})}$ )

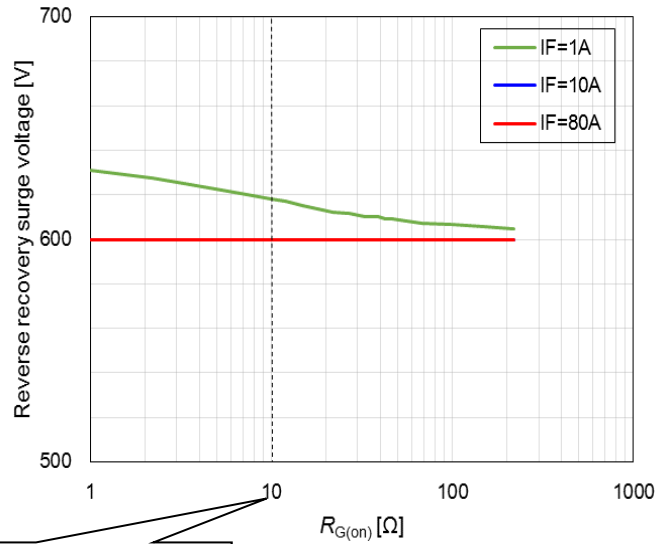
Conditions:  $V_{CC} = 600\text{V}$ ,  $I_C = 10\text{A}, 20\text{A}, 40\text{A}, 80\text{A}$ ,  $V_{GE} = 15\text{V}/0\text{V}$ ,  $R_{G(\text{off})} = \text{var.}$ ,  $T_{vj} = \text{R.T.}$



$R_{G(\text{off})} = 10\Omega$   
Described value on the datasheet

(3) Reverse recovery surge voltage vs. Gate resistance ( $R_{G(on)}$ )

Conditions:  $V_{CC} = 600\text{ V}$ ,  $I_F = 1\text{ A}, 10\text{ A}, 80\text{ A}$ ,  $V_{GE} = 15\text{ V}/0\text{ V}$ ,  $R_{G(on)} = \text{var.}$ ,  $T_{vj} = \text{R.T.}$



$R_{G(on)} = 10\Omega$   
Described value on the datasheet

Please use the data as a reference. Please confirm the characteristics by using actual equipment.

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